



FIRST AID AND RESCUE WORK



49
Archivos
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Roll up each dressing, place on plate, and bake in oven to render sterile, and put into sealed envelope along with a small safety pin. The envelope should always be baked for a short time. The dressing is ready for use and can be applied quickly. It is most important to touch the lint as little as possible while cutting and sewing it, keeping the fingers away from the face of the lint.

(b) *How to make triangular bandages.* These can be cut up from old sheets or other material, for measurements see page 132. The edges should be hemmed, the bandages washed when made, neatly folded and stored ready for practice, and in a fit condition to be put into immediate use in the event of an accident.

(c) *How to make roller bandages.* These also can be cut from an old sheet or other material (see page 141 for different widths). Wash, iron, roll tightly ready for use.

(d) *How to make splints.* For improvising and padding splints see page 147. Splints can be covered with odd cuttings of sheet left over from making (b) and (c).

A properties box for First Aid should be aimed at as the possession of each company. It is important to decide what shall be used for practice or what shall be kept carefully stored for any accident that might happen. All dressings and bandages should be kept covered neatly.

4. A Bed-Table and a Bed-Rest

A bed-table can be made from a converted packing-case. Skill and craftsmanship should be shown in the making and subsequent painting or staining (see page 174).

A bed-rest can be made from lashing slats of wood and weaving a back of netting string (see page 173).

CHAPTER III

HOME SECTION

(a) Home Nursing and Care of a Person in Bed

Hints to the Nurse

- Choice of room; its maintenance
- Bed-making and changing sheets
- Bathing a patient in bed
- How to take: a temperature, a pulse, respirations
- Bed-pan
- How to give an enema
- How to give an aperient
- Care of mouth
- Care of hair

General Information

- How to make fomentations, cold compresses and poultices
- Infectious diseases. The chief symptoms that would make it necessary to send for a doctor
- Chart of infectious diseases
- Treatment of sore throats and colds, consumption
- Heat of baths
- The improvising and use of nursing equipment
- Invalid drinks and dishes

(b) Care of Sick Children under 8 years

Emergency Helper (Nursing Section)

Syllabus, page 47.

Course of Instruction, page 47.

Sick Nurse (Extension Badge)

Syllabus, page 76.

Course of Instruction, page 77.

Samaritan Badge (Nursing Section)

Syllabus, page 65.

Course of Instruction, page 71.

Section (a)

Home Nursing

HINTS TO THE NURSE

When there is illness in her home the Ranger or Guide has her chance to carry out her service training to the full.

Here is no moment for the quick expediency of First Aid, but instead the reliable steady effort to get ill persons fit as quickly as possible, thinking of their comfort, cheering their depression, studying them with understanding and patience, discerning when to accede to their wishes and when to be firm for their good, throughout having a cheerfully optimistic strength and a calm, unruffled countenance.

When Nursing someone, remember

1. To see that the doctor's instructions are carried out.
2. To note and report to the doctor any changes in the patient's condition.
3. To keep the room clean, tidy and aired, and the right temperature (as prescribed).
4. To see that the bed is well made, and the patient as comfortable as possible.
5. To see that the food is well served, and that every tray that comes into the sick-room looks attractive and appetizing.
6. To move and speak quietly.
7. To keep fit yourself. A short break of outside exercise is best for this.

Do not fuss round your patient. Fussing will make a nervy patient worse, and a normal one irritable. If you are on duty in the room, sit a little way away where you can see your patient easily, and occupy yourself quietly reading or sewing.

Do not be clumsy. Noise and roughness will add to nerve strain and discomfort. Never hold on to the bed or sit on it or shake it.

Do not talk loudly. A loud voice or overbearing manner, or even forced cheerfulness, is most tiring. The nurse

should use a quiet, ordinary voice, avoiding the funereal whisper which some people adopt where there is illness. Never hold conversation with others in the sick room. One visitor at a time is enough.

CHOICE, PREPARATION AND MAINTENANCE OF SICK ROOM

It is rare that an ideal room can be chosen, usually it is a case of making the best of the patient's usual room.

The chief things to consider are:

1. **Ventilation.** Light, air, sun if possible. See that the windows open and the chimney has not been blocked up.

2. **Position of bed.** See that the bed does not face the window, as direct light on the patient's eyes can be very trying. Avoid draughts, be ready to improvise a screen (which can be made from a cotton curtain, table cloth or towel stretched or drawing-pinned on to a tall clothes horse).

3. **Preparation of room.** Put away all possible ornaments, knick-knacks, pictures and hangings. A rug is better than a carpet. The more empty the room, the easier for maintaining cleanliness. This does not mean that it need be unattractive. Surroundings make a great difference to a person who is ill. Such things as a vase of flowers or a brightly-coloured picture can be stimulating and arouse interest and pleasure.

4. **Maintenance.** The room should be swept, brushed or mopped, and all furniture dusted with a damp duster. It is important, while thoroughly removing the dust, to keep as much as possible from flying about, and to let in a constant supply of fresh air. Ventilate the room thoroughly twice a day.

5. **Equipment for nursing.** Medicines, dressings, etc., should be neatly stacked on a tray, covered if possible by a clean towel. The tray should not be too obvious or near the patient. The bed-pan should be kept covered also, and put out of sight, but within easy reach.

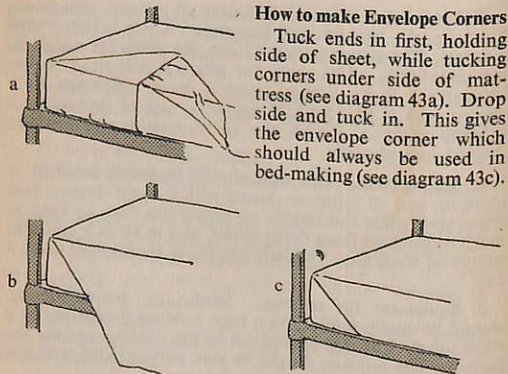
In nursing infectious diseases, plates, cutlery, cup and

glass should be kept on a separate tray, also covered, together with a drying-up cloth, as they should be washed apart from those used by the household (see page 168).

BED-MAKING

Preparation of Bed for Patient

1. Mattress.
2. Under-blanket. Tuck in firmly at head to prevent weight of patient's body dragging it down.
3. Under-sheet. Tuck in as above and all round. Keep it smooth. Wrinkles can cause bed sores.
4. Draw-sheet if required.
5. Pillows.
6. Upper sheet.
7. Blankets.
8. Sides tucked in.
9. Quilt. Laid on, and top of upper sheet and blankets folded down over it.



43—How to Make Envelope Corners

A Draw-Sheet

This is a long, narrow sheet (sometimes an ordinary sheet folded in half lengthwise, see page 159). It is placed across the bed to reach from the patient's shoulders to her knees. Leave just enough to tuck firmly in at one side. On the opposite side fold up the surplus and tuck it under the mattress. This can at any time be quickly unfolded and a fresh piece of it drawn through under the patient. A mackintosh draw-sheet is sometimes advisable under this. It should be slightly narrower, and just long enough to tuck in at each side.

A Mackintosh Sheet

In cases of severe fever or hæmorrhage a full-length ground-sheet can be placed over the mattress instead of the under-blanket.

Additional Points for a Stretcher Case

1. If an accident case must be put on to the bed before being undressed, a receiving blanket is laid over the bottom sheet, and removed after the patient has been undressed and washed.
2. To make it easier to get a helpless patient into the bed, leave all the top bed-clothes untucked—fold the sides of these to the middle, and then the ends to the middle. This will leave the whole centre of the bed covered, and hot-water bottles can be put in it and will keep hot there, but the clothes can rapidly be removed when the patient is ready, and replaced over her, and tucked in as usual.

Fracture Beds

For certain fracture cases the doctor may order boards to be laid under the mattress to ensure complete flatness.

Rheumatism Bed

Nurse patient between blankets without sheets. Always keep a spare blanket airing.

Airing the Bed

This is important, and if not too ill it may be possible to wrap the patient up in a blanket to sit by the fire while the

bedding is pulled back, removed and shaken, and allowed to air and the mattress turned.

Remaking Bed and Changing the Sheets

1. If the patient is allowed out of bed:

- (a) Close the windows.
- (b) Help the patient on to a sofa or arm-chair—see that she is warmly wrapped up and comfortable.
- (c) If clean sheets are needed, warm them beforehand and have them ready.
- (d) Untuck all the bed-clothes from the sides and ends of the bed. Take each sheet or blanket singly, fold it over once from head to foot and lift it over a chair. If the under-sheet is crumby take it outside and shake it. Turn the mattress from top to bottom.
- (e) If the patient is allowed to sit up for twenty minutes or half an hour, leave the bed to air for that length of time.
- (f) Make up the bed again as described in the previous section. If one clean sheet only is to be put on it is probably best to use the former top sheet for the bottom and to put the clean sheet on top.
- (g) Put a fresh hot-water bottle into the bed, and then help the patient back. See that the pillows are comfortable and that anything she may need is within reach.
- (h) Tidy the room, removing any dirty sheets, handkerchiefs, etc.
- (i) Reopen the window.

2. If the patient is not allowed out of bed:

- (a) *Straightening the bed.* It is essential that the bed should be thoroughly straightened and made as comfortable as possible twice a day. To do this, untuck the bed-clothes, turn up the sides of the top layer so that it is well round the patient but out of your way. Draw the under-blanket and sheet taut on each side and tuck them in firmly one at a time, removing any crumbs—to do this roll the patient on one side as for changing sheets (see page 159). Make sure no wrinkles are left. If a draw-sheet is used, pull this through

until the patient is lying on a fresh piece, then draw this tight and tuck it well in. Straighten the top clothes singly, starting with the sheet. Tuck in as before. Shake up the pillows.

(b) *Changing the top sheet.* Untuck all the clothes and straighten the bottom layer as described above. Remove all the top bedding singly except for one blanket and the sheet. Put the clean sheet over this blanket and another blanket on top of this. Unless you have a helper at the other side of the bed, ask the patient to hold on to the top of the clean sheet and top blanket while you quickly draw out the other sheet and blanket. The patient is thus never uncovered. Replace the blanket or blankets and tuck in as before.

(c) *Changing the bottom sheet.* Roll the clean sheet lengthways to about half its width. Untuck all the clothes. If the patient is quite helpless you will need some assistance. One person turns the patient gently on to her side, with her back to the person who is changing the sheets. The latter quickly rolls the dirty sheet lengthways till it reaches the patient's back. She then lays the clean sheet so that the two rolls of sheet lie alongside, straightens and tucks in her side of the clean sheet, and the patient can then be gently rolled on to her back and over the rolled sheets on to her other side. The dirty sheet is then quickly removed, and that side of the clean sheet unrolled and tucked in.

A draw-sheet is changed in the same way, taking care to roll up the shortest end to pass under the patient.

If a patient cannot be turned on one side, which is the case with some fractures, the bottom sheet can be rolled widthwise for nearly the full length, and one end tucked into position at the foot of the bed. The dirty sheet is then gradually rolled up and the clean sheet is unrolled at the same time. Two people are needed for this, and if the patient cannot move at all, a third will have to raise her as the sheets are passed under.

It is important that the patient be kept covered by the top clothes during the changing of sheets.

Much practice is needed before this can be done quickly and gently, with the minimum disturbance to the patient.

BATHING A PERSON IN BED

Preparations

1. Close windows.
2. Fill a hot-water bottle and put at patient's feet.
3. Get a bathing blanket, two towels, two flannels for washing (or one sponge and one flannel), two basins of hot water (one small for soapy water, one larger for rinsing), large jug of very hot water (for keeping up heat of water in basins), soap, powder for dusting, mug of water for teeth, tooth brush, paste and receiver, hair brush and comb, change of nightdress or pyjamas (if desired), change of sheets (if desired).

Procedure

1. Roll the bathing blanket under patient (see changing bottom sheet, page 159). Wrap the patient in the blanket, keeping opening down front.
2. Wrap one towel round part to be washed, exposing as little of the body at a time as possible.
3. Order of washing and drying: (a) Face and neck; (b) upper limbs (one at a time); (c) chest; (d) abdomen; (e) lower limbs (one at a time); (f) back (rolling patient on side); (g) between legs (while patient is still on side; bend up patient's knees).

Notes

1. Keep water very hot.
2. Wash the limbs farthest from you first, and dry well.
3. Cover each part that has been exposed as quickly as possible, and keep warm.
4. Rub lower part of back, heels and elbows hard with the palm of your hand, with powder. This will ease any friction caused by a long period in bed and so avoid bed-sores.
5. Speed. Ten minutes from start to finish of a blanket bath is the recognized time allowed.

TAKING A TEMPERATURE

Take by clinical thermometer (see diagram), either under the tongue, in the armpit or in fold of groin.

The normal temperature of the body is 98.4 degrees F.

Time: morning and night.

Record at once. Shake down and cleanse the thermometer after use.

Keep in small jar of disinfectant solution with cotton wool to prevent breaking.

Note. Never leave a patient alone with a thermometer in the mouth. Be very careful to take the time (not less than one minute).

The normal temperature, 98.4, is marked on the thermometer with a deep horizontal line and often an arrow.

Care should be taken not to take a patient's temperature immediately after a medicine or hot drink.

A thermometer should not be put in the mouth of a small child. It can be taken under the armpit while the arm is held across the chest.

44—A
Clinical
Thermo-
meter

Always write down the temperature immediately, then shake thermometer until the mercury is down to the level at which it is kept, approximately 95 degrees F.

TAKING A PULSE

Taking the pulse-rate is very important, because the strength of a person's pulse depends upon the strength of the heart-beat. If the pulse is very weak it means that the heart is not working properly. To take the pulse, place three fingers on the hollow formed on the thumb side of the front of the wrist. The artery will be felt throbbing under the fingers. Hold a watch with a second hand and count the pulse for a full minute. Never use the thumb in taking the pulse, as you can feel your own artery in your thumb, and you may mistake this for the artery of your patient. A

HOW TO GIVE A BED PAN

Requirements

Bed pan (in which there can be a very small quantity of water with Dettol) covered by a cloth.

If required, paper or cotton wool.

What to do

Warm the bed pan by a fire, or with warm water, dry the outside, test with hand to see that no part of it is too hot. Untuck the bed-clothes at the side of the bed, and if the patient can raise herself the bed pan can then be slipped under. Further help can be given where necessary by holding the bed pan with the hand nearest to the foot of the bed, slipping the other hand under the patient, raising her gently, then sliding the pan into position. Be sure that no bed-clothes or night-clothes are in the way. It is important to remember that as little fuss as possible should be made. It is unnecessary to pull back the bed-clothes more than enough to slip the pan in. Remove the bed pan in the same way and lower the patient, after having made her clean and straightened her night-clothes if she is unable to do so for herself. The bed pan should be immediately covered with a cloth, and as soon as the patient is lying comfortably, and tucked in, it must be taken from the room and the room aired.

Care of Bed pan

Scrupulous cleanliness is essential, as germs in many illnesses can be carried in this way. Empty the pan immediately after use, unless otherwise ordered by the doctor. After emptying, rinse it out very thoroughly, first with jugs of cold water and then with a weak antiseptic solution. Wash it with hot water and strong soda once a day. Keep a special mop in a jar of disinfectant for the purpose. Always wash the hands thoroughly after handling a bed pan.

HOW TO GIVE AN ENEMA

In cases of severe constipation or before an operation an enema may be ordered.

Requirements

A syringe (usually Higginson's); 1 oz. of yellow soap; 2 pints of water (temperature 95 to 100 degrees F.); vaseline; mackintosh sheet; towel; bed pan (if patient is bedridden).

Make sure that the syringe is clean and working well. Dissolve the soap in the 2 pints of water. Turn patient on to left side, drawing up knees. Slip mackintosh and towel under patient, leaving her covered with blanket. Put vaseline round nozzle of syringe, gently insert, having left time for muscles to relax. The injection should be given slowly, care being taken to eject all air from tube before inserting nozzle, and afterwards to keep the other end of the tube under water until enema injection is complete. If patient complains of discomfort, pause for a time and continue more slowly. It may not be possible to give the whole of the injection. When the nozzle is removed, pressure on the anus will help the patient to retain the enema for a while, which is advantageous.

Aperients

Exercise and a well-balanced diet should keep a person healthy and ensure a regular daily clear out. Constipation can give rise to many troubles and seriously undermine health.

An aperient should only be used where fruit, vegetables or exercise cannot correct the constipation, but the practice of giving them should never become a habit. Slow-acting aperients, such as medicinal paraffin, cascara, syrup of figs, etc., should be given at night; and quick-acting ones, such as salts, etc., should be given in the early morning. The prescribed doses should not be exceeded.

CARE OF THE MOUTH

A patient's mouth should be kept really clean. Her teeth should be brushed twice a day, using paste or powder.

In many illnesses the teeth and gums get covered with an unpleasant film, and frequent mouth-washes will be necessary. The doctor will probably prescribe a suitable mouth-wash, otherwise glycothymoline, or a mixture of glycerine and borax with a little lemon added, are good cleansers.

If the teeth cannot be brushed the mouth may be swabbed out with cotton wool or gauze, wrapped round a small, blunt stick and dipped in the mouth-wash. The gauze must, of course, be changed frequently. After this the patient may rinse out her mouth with the mouth-wash.

CARE OF THE HAIR

Daily Attention. Hair must be well brushed and combed twice a day. The brush and comb should be washed frequently, and the hair washed as soon as possible after an illness.

Treatment of Dirty Heads. A so-called 'dirty head' is one that is infested with lice and their nits (or eggs). A louse may hop from one head to another in close proximity, or may be caught from a cushion, hat, comb, etc., recently used by an infested person.

Method 1. Time: two hours. First clean the head with paraffin, rubbing it well into the hair and scalp. This will loosen the nits, which are stuck to the hair by a kind of cement. Next make a lather with 1 oz. borax, $\frac{1}{4}$ lb. of soft soap and a quart of hot water. Rub this well in all over the head and hair and leave it on for five minutes. Rinse off with plenty of water, and while still wet go through the hair very thoroughly with a small-tooth comb—a metal one is much the most effective—removing all the dead nits and lice. Rinse again, and all should be well, except in very bad cases, where some nits have got into the scalp and so have escaped destruction. Look through the hair with a small-tooth comb dipped in mild antiseptic for the next few days, and a weekly wash for the next two or three weeks is a safe precaution.

Method 2. A slower but easy and safe method is to wet the hair thoroughly with one of the following: lethane oil, sassafras, or equal parts of paraffin and olive oil. Wrap the head in a large cotton handkerchief or bandage, and cover with a bathing cap or mackintosh hood, and leave it overnight. The next morning wash it with disinfectant soap and plenty of hot water. Derbac soap is excellent, and makes a good lather on any of these oils. It is a good protection, and can be used for the next few hair washes.

Caution. When using paraffin, do not allow the person near a fire, or other naked light.

Note. Lethane is a fairly new preparation which is being much experimented with, incorporated with brilliantine, used as sprays, etc. It is an effective protection when in contact with infested persons.

All the work of cleaning a head will be wasted if it is re-infected by a hat, scarf, towel, pillow, brush or comb, etc., so all these must be carefully dealt with. Washing in disinfectant soap is satisfactory, or steaming or baking for five minutes in a temperature of 158 degrees Fahrenheit.

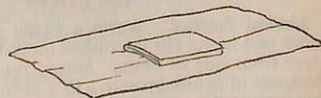
GENERAL INFORMATION FOMENTATIONS, Etc.

To Apply a Hot Fomentation

Requirements: Long, thin towel for wringer; kettle of boiling water; strip of folded lint, jaconet and cotton wool; bandage.

Put the wringer over the basin, then fold the lint into four layers, leaving it large enough to cover the wound which is to be fomented.

Place this on the towel and pour plenty of boiling water on it until it is soaking wet (or, if for a wound, before placing the lint on the wringer keep in a boiling saucepan for three minutes); then take the ends of the towel and fold so that the lint is wrapped in it. Twist the ends of the towel in opposite directions until the lint is wrung as dry as



46—Lint Folded on Wringer



47—Wringing Out the Fomentation

possible. It is important to remember that the fomentation can be put on much hotter if it is dry; so it should be squeezed very tightly. Unfold quickly and put the fomentation on the wound. If lint is used, put the smooth side of the lint next to the wound. Cover with jaconet and a thick layer of cotton wool. The covering should be larger than the fomentation. If these things are not available, the fomentation can be covered with a folded piece of bath towel. The whole thing must be bandaged afterwards.

Boric Fomentations. Instead of plain lint use pink boric lint and proceed as above.

A Cold Compress. To make a cold compress, double-fold a piece of lint to the required size, wring it out in cold or iced water.

A slightly larger piece of waterproof material will be needed to cover it before it is bandaged into position. The inflamed area will quickly dry off the lint, so that it will need constant re-wetting.

Note. Omit the waterproof material in the case of a child, using cotton wool instead.

POULTICES

Linseed Poultice. Warm a basin; pour a little boiling water into it and stir in crushed linseed until it comes clean away from side of basin. Spread on lint with a knife to thickness of approximately $\frac{1}{4}$ to $\frac{1}{2}$ inch. Put linseed next to skin. If possible, cover with thin gauze to avoid sticking.

Antiphlogistine, Kaolin, etc. Heat tin by holding in front of fire or laying on stove. Spread the clay mixture with a knife on a piece of lint. Apply as hot as possible, but test on patient's arm to avoid risk of a burn.

Bread Poultice. Use stale bread crumbs and boiling water. Roll the bread in lint and pour boiling water on, wring out surplus water and apply hot.

INFECTIOUS DISEASES

The growth and prevention of germs of disease.
Germs enter the body:

- (a) By inhalation—the breathing of infected air;
- (b) By mouth—swallowing with food;

(c) By cracks—sores on the skin;

(d) By contact with things an infected person has touched.

Prevention

The means are:

1. Fresh air. Ventilate house well. Keep well people out of doors a great deal;

2. Keeping fit—health rules;

3. Cleanliness and use of disinfectants;

4. Careful attention to cuts and sores;

5. Isolation of anyone suffering from an infectious disease, and careful nursing;

6. By washing all cutlery and plates apart from those used by the household. By burning papers or books that the patient has handled;

7. A sheet soaked in disinfectant hung over the outside of the door is useful when the passage or landing has to be used by others.

8. Disinfecting infected excreta and discharges with a solution of Lysol or Cresol, etc.;

9. Observing the rules of quarantine.

General Signs of Infection

Headache, continued thirst, sickness, aching limbs, rise of temperature, dirty tongue.

Note 1. Nursing Infectious Illnesses

After an infectious disease the patient should be washed *all* over, including the hair, and afterwards put in a clean bed in a clean room. Fumigation (the burning of a formalin lamp) should be carried out in the sick room, with its doors and windows sealed.

Note 2. To Prevent Spread of Infection during the Illness

The nurse should change her overall on leaving the room. Immerse all bed-linen, handkerchiefs, etc., in Cresol (1-40) or 2 per cent Lysol for a day, before they are washed.

CHART OF SOME OF THE MOST COMMON INFECTIOUS DISEASES

<i>Disease</i>	<i>Incubation</i>	<i>Sign</i>	<i>Quarantine</i>	<i>Remarks</i>	<i>Prevention and Precautions for Contacts</i>
Cold	2-3 days	Sore throat, running nose	—	—	Gargle with salt and water
Influenza	Sudden onset	Cold, temperature, aching limbs, or gastric	—	Isolate patient until 3 days after temperature returns to normal	Gargle with salt and water
Diphtheria	2-10 days	Severe sore throat, discharge from nose, langour, temperature	14 days	Patient isolated until doctor pronounces free of infection (several weeks)	Inoculation, strict isolation
Scarlet Fever	1-7 days	Sore throat, feverishness, rapid pulse, strawberry tongue, rash—neck and chest	14 days	Peeling stage is highly infectious	Strict isolation
Measles	10-14 days	Cold and running eyes, bluish spots in mouth, fever, rash 4th day	21 days	Complications, particularly of eyes and ears, must be guarded against	Isolation
German Measles	18-21 days	Swelling glands, rash and sore throat	21 days	Isolate 10 days from appearance of rash	Isolation
Chicken Pox	12-21 days	Rash with distinct spots 1st day, rising temperature	21 days	Isolate until patient is clear of scabs	Isolation
Mumps	12-15 days	Swollen glands, temperature	24 days	If swallowing is very painful give liquids only	Isolation
Whooping Cough	6-18 days	Nasal catarrh, spasmodic cough, whooping and sickness later	6 weeks	Usually infectious until cough subsides	Isolation

Prevention THROATS OR COLDS

1. Changing wet clothes, shoes and stockings.
2. To avoid infection from others:
 - (a) Fresh air (keep windows open);
 - (b) Gargle—T.C.P., etc. (instructions on bottle);
 - (c) Inhalation—Vapex, etc. (on handkerchief).

Treatment

1. Sore throat—gargle (10 grains aspirin to $\frac{1}{2}$ pint of water is very soothing).
2. Streaming cold (sniff up bicarbonate of soda, 1 teaspoonful to $\frac{1}{2}$ pint).. Stuffy cold often relieved by Vick, vaseline and camphor, etc.
3. Take temperature (if person affected really feels ill).
4. Keep in bed if temperature is up or cold on chest.
5. Inhalation: 1 teaspoonful of Friars balsam or eucalyptus in a jug of boiling water; inhale for several minutes with a towel over head. This can only be done if patient is staying in one room of even temperature, never if going out.
6. If symptoms increase, send for the doctor.

Do not Pass On Colds

- (a) By leaving dirty handkerchiefs about (immerse in disinfectant); (b) By kissing people (especially children).

CONSUMPTION

As in other infectious diseases the germs of consumption are carried by throat inhalation, by using contaminated utensils, or by swallowing infected food.

The greatest care to prevent spread of infection will naturally be the responsibility of the nurse and the patient herself until the consumption is cured.

A handkerchief should be held to the mouth when coughing, and a small covered cup containing disinfectant should be used for the patient to expectorate into.

Cutlery and crockery must be kept apart as in all other infectious diseases. Whenever it is possible it is very beneficial for the patient to live in the open air. Fresh air will be the greatest possible help for a speedy cure, and where a hut in the open or a temporary visit to a hospital is not possible, all windows should be kept wide open night and day.

WHEN ANY INFECTIOUS DISEASE IS SUSPECTED A DOCTOR SHOULD AT ONCE BE CONSULTED.

HEAT OF BATHS

Cold	= 50-70 degrees F.
Tepid	= 75-90 degrees F.
Hot	= 98-105 degrees F.

TYPES OF BATHS

Alkaline Bath. $\frac{1}{2}$ ounce of carbonate of sodium should be added to every gallon of water.

Brine Bath. 6 ounces sea salt or 12 ounces common salt should be added to every gallon of water.

Disinfectant Bath. Unless the doctor orders the addition of a disinfecting solution, it is usually sufficient to use plenty of hot water and a disinfectant soap, such as carbolic.

Mustard Bath. 1 ounce to every gallon of water.

THE IMPROVISING AND USE OF NURSING EQUIPMENT

1. **Back-Rest.** This is a great help if the patient is to be kept continuously in a sitting position. A proper back-rest is usually adjustable, but quite a good improvisation can be made by turning an ordinary wooden chair with its seat over the head of the bed, and the back of it forming a slope for the patient to lean against. It must, of course, be well padded with cushions or pillows.

A comfortable back-rest can also be made with six or eight pillows arranged diagonally in pairs with the ends overlapping behind the patient. If chair cushions are used as pillows to make up the number they should be slipped into pillow cases or other washable covers.

2. **Bed Blocks.** In cases of emergency, such as bleeding or for some internal complaints, etc., a doctor will sometimes order the foot of a bed to be raised. A temporary measure can be the placing of the seat of a kitchen chair under the foot, raising the bottom of the bed, while more permanent blocks can be found.

Solid logs cut to the right measurement, 12-18 inches (or as ordered by the doctor), serve the purpose very well. If the bed has castors, holes should be carved out of the centre of the blocks so that the bed will not slip.

3. **Bed Jacket.** A patient should wear something extra when sitting up in bed; a cardigan makes a good substitute for a bed jacket, and needs less exertion to slip on and off than a dressing gown if the patient is weak or unable to raise herself.

4. **Bed Table.** Can be improvised from:

- (a) A rush stool;
- (b) A strip of plywood nailed on to four short-stripped, thin logs of wood;
- (c) A packing-case, cleaned, planed and painted (a strip pocket of plywood or material attached to one side is of great use to an invalid to keep letters, a book, or knitting in).

5. **Bells.** It is important for someone who is ill to feel that they can get help. A very small hand-bell will often not sound far enough to be heard, but one suspended from the banisters on the end of a ball of string may serve the purpose better. A whistle is more effective and the sound carries a long way.

6. **Draw-Sheet.** Essential for comfort and cleanliness when a patient cannot be moved out to have the bed made thoroughly. Make one by folding a single sheet in half lengthways, and place it with the fold towards the head of the bed. Directions for use, see bed-making, page 157.

7. **Foot Cradles.** The object of these is to take the pressure of the bed-clothes off one or both legs—usually in the case of serious injury. A small, low three-legged stool placed over one leg can be an adequate protection, or a box with the ends taken out, or a frame can be made from two pieces of a child's hoop, screwed or lashed together. If none of these is readily available, as a temporary measure the bed-clothes, instead of being tucked in at the foot, may be hung over the end of the bedstead, if this is of a suitable height and the clothes are large enough still to cover the bed and leaving no spaces.

8. **Hot-Water Bottles**

- (a) Rubber ones should be filled about three parts full with water which is off the boil. The air should be squeezed out and the stopper screwed in tightly, and any surplus water shaken out. Make sure that the washer round the screw is in position and not worn. An old bottle with worn and weak patches is not safe, and it may burst in the bed.
- (b) Stone bottles may, and metal bottles must, be filled to the brim with boiling water, and the stopper screwed in tightly and tested. These will keep hotter considerably

longer if they are heated first, either by being rinsed out with hot water or being warmed by a fire or in an oven.

(c) Improvised hot 'bottles' may be made from stones or bricks, heated in a fire or oven, and well wrapped in flannel, or an aluminium flask may be filled with water. Even a glass bottle may be used, provided the stopper is really secure and care is taken to warm it gradually so that it does not crack with the heat of the water. Great care must be taken with all hot bottles that they do not burn the patient, especially in the case of anyone unconscious, e.g. after an anaesthetic, or helpless, or a small child. They should have adequate covers or be wrapped in flannel, or failing either they may be inserted between the blankets, leaving a sheet and a blanket between the patient and the bottle. They should never touch the patient.

9. **Knee Pillow.** This often is called a donkey, and is to prevent the patient from slipping down the bed. A sheet is rolled lengthways round a hard pillow or bolster and the ends of the sheet are either tucked under the mattress at each side or tied to the posts at the head of the bed.

10. **Pulley.** This is for the use of someone who is crippled in bed to help them to change their position in bed or to sit up. There are various methods of improvising this:

- (a) A rope from each side of bottom rail of bed, with a loop for the hand of the patient;
- (b) A single rope from the head of the bed to the foot-rail;
- (c) A short rope attached to either side of the bed.

TO FEED A HELPLESS PATIENT

Prepare food; if there is no invalid drinking cup in the house (i.e. a cup with a spout) a small teapot can be used. Raise patient; slip a hand under the pillow and patient's shoulders, raising head and so making the position for swallowing more easy.

Test food to see that it is not too hot. Give the drink slowly, with sufficient time for swallowing.

Note. If the patient is too weak to manage this, feed with a spoon. In serious illness the mouth may cause great discomfort and need cleaning before and after food. A swab of cotton wool with glycothymoline solution will help.

INVALID DRINKS AND DISHES

All food for invalids should be made from fresh and pure ingredients and, if possible, prepared just before serving.

The doctor should be consulted as to the foods and quantity allowed, and then imagination used to make the diet as attractive as possible. Simple but varied methods of cooking are best, avoiding too much pepper and salt or making things too sweet or too rich, as invalids in bed are easily upset. Colour schemes are very important, the addition of freshly chopped parsley, or mashed carrots, or tomato purée, makes all the difference to steamed fish and mashed potatoes!

It is best to give small servings at first and allow second helpings, and to give the patient what he likes as far as possible. Plenty of fluids should be included and fresh water must always be available, unless fluids are restricted by the doctor's orders.

A well-laid tray, with clean cloth and shining utensils, is most important; avoid chipped or cracked plates or cups as these harbour germs as well as looking unattractive. Finally, serve all food tidily, and serve it hot, and make yourself clean and tidy before taking it to the patient.

The following are a few suggestions for invalid dishes; many more can be found in cookery books; directions for making any patent foods ordered will be found on the tin.

Barley Water

2 oz. pearl barley, 1 oz. sugar, $1\frac{1}{2}$ pints water, 1 lemon.

Wash the barley, put it into cold water and bring to the boil. Strain off the water and rinse the barley in cold water. Place barley and thinly peeled lemon rind and $1\frac{1}{2}$ pints water in saucepan and simmer gently for 1 hour. Strain off the liquid, allow to cool and add sugar and juice of lemon. Keep in cool place and make fresh at least every two days.

Note. Rice water may be made in the same way.

High Calorie Fruit Drink

2 oranges or 2 lemons, or 1 of each, $\frac{1}{2}$ pint water, 4 oz. glucose. Boil the water and pour over the glucose, stirring till it has all dissolved. Leave to cool. When cool, add the strained juice of the fruit. Keep in a cool place.

Note. 3 ozs. glucose with 1 oz. brown sugar may be used if preferred.

Blackcurrant Tea

$\frac{1}{2}$ pint water, 1 tablespoonful blackcurrant jam, or jelly, or blackcurrant purée.

Boil the water and pour over the blackcurrant, stirring well. Strain and add sugar to taste; serve hot or cold.

Note. The tinned blackcurrant purée has a very high content of Vitamin C, and should always be used when obtainable, in preference to jam.

Chicken Broth

Chicken bones (whole uncooked chicken if available may be used).

Break the bones and just cover with cold water. Bring slowly to the boil and simmer for at least 3 hours. Strain, and allow to stand, and remove fat. Add a little pepper and salt and reheat before serving.

Note. As a variation, the following may be added:

- Beaten yolk of egg and cream may be added just before serving;
- A little sago, semolina or spaghetti may be cooked in it;
- Diced carrot, a few peas, or any other vegetable may be cooked in it.

Beef Tea

$\frac{1}{2}$ lb. lean beef, 1 pint water.

Cut up meat finely, removing any skin or fat, and place in an earthenware jar in a slow oven or in a double saucepan, and cover with water. Bring very slowly to the boil and simmer gently for $\frac{1}{2}$ to 1 hour. Strain and remove any fat, and season and reheat before serving.

Milk Vegetable Soup

1 cup ($\frac{1}{2}$ pint) of milk, $\frac{1}{2}$ cup water, potatoes, carrots, celery, cauliflower, tomato, etc., 1 level dessertspoonful cornflour.

Cook one or several vegetables in the milk and water until soft. Sieve the liquid and reheat. Mix the cornflour with a little cold water or milk, pour on the hot soup, stirring well. Return to the pan and boil for 5 minutes, stirring all the time. Add pepper and salt before serving.

Note. For tomato soup, thicken the milk and water first before adding the sieved tomato.

Arrowroot Gruel

$\frac{1}{2}$ pint milk, 1 dessertspoonful arrowroot, 1-2 teaspoonfuls sugar.

Mix the arrowroot with a little cold milk. Boil the milk, pour on to arrowroot, add sugar and return to pan and boil for 5 minutes, stirring all the time. Add vanilla flavouring if liked.

Junket

1 cup ($\frac{1}{2}$ pint) milk (delivered on the day of making), 1 teaspoonful rennet, 1-2 teaspoonfuls sugar.

Heat the milk slowly to blood heat (not more). Stir in the sugar and then add rennet, stirring well. Pour at once into a clean dish, without further heating, and stand in a warm place until set. Then remove to cool until serving.

Note. It is important to use fresh milk, not to overheat, and for any amount under a pint, to use the quantity of rennet or junket powder recommended for a pint of milk. Coffee essence or cocoa may be dissolved in the milk before adding the rennet, or any colouring or flavourings may be used for a change.

Blancmange

1 cup milk, 1 tablespoonful cornflour, 1-2 teaspoonfuls sugar.

Mix the cornflour and sugar with a little cold milk. Boil the rest of the milk and pour slowly on to the cornflour, stirring all the time. Return to the pan and boil for 5 minutes, stirring well. Pour into a clean mould and leave in a cool place to set, until ready to serve.

Note. Serve with stewed fruit, with jelly, or jam, or with plain cake. It may be varied by adding colouring, or coffee essence, or by mixing 2 teaspoonfuls of cocoa with the cornflour.

Exactly the same method is used for custard powder custard.

Semolina Pudding

$\frac{1}{2}$ pint milk, 1 dessertspoonful semolina, 1-2 teaspoonfuls sugar.

Bring the milk to the boil, and sprinkle semolina on the top, continuing to boil the milk and stirring well. Add the sugar and boil, and stir for 5 to 10 minutes until mixture is

thick. Add vanilla or other flavouring as desired. Serve hot or cold.

Note. Any small-grain cereal, such as ground rice, fine oatmeal, etc., may be cooked in this way. Rice, sago, etc., are best baked in the oven, or cooked in a double saucepan for at least 1 hour.

Semolina Souffle

Cook as above, but when cereal has thickened stir in the beaten yolk of an egg. Beat up the white stiffly, and stir lightly into the mixture. Put into a greased fireproof dish and place in a fairly hot oven till just brown on top.

Baked Custard

1 egg (or equivalent dried egg), $\frac{1}{2}$ pint milk, 1 dessertspoonful sugar.

Heat the milk, but do not boil it. Beat the egg, add the sugar and pour the milk on, stirring well. Pour into a greased fireproof dish and bake in a moderate oven, $\frac{3}{4}$ to 1 hour, standing in a dish of water until the custard is set and brown on top. If cooked too quickly it will curdle and crack. Serve hot or cold with stewed fruit, jelly, jam, etc.

Note. Many people prefer a plain biscuit or rusk to eat with it. A few drops of vanilla essence may be added before cooking if liked.

Steamed Fish

Place fillets of white fish, such as sole, plaice, etc., on a well-buttered plate and sprinkle with lemon juice and a little salt. Cover with another buttered plate and stand on a large pan of boiling water. Cook 15 to 20 minutes. Sprinkle with a little chopped parsley before serving.

Baked Fish

Place fillets of white fish, which may be rolled up or left flat, in a buttered fireproof dish. Add a little milk and a small piece of butter or margarine and a little salt. Stand the dish in a pan of water and bake in a moderate oven for about 20 to 30 minutes. The milk may be strained off and made into a sauce if liked.

Fish Custard

Make as baked custard, omitting the sugar, putting flaked or fillets of white fish in before cooking, and adding pepper and salt.

HOME SECTION

SECTION (b)

Care of Sick Children under 8 years

Slight Resistance to Shock

The first important point to remember about children is that their *power of resistance* to shock is *much less* than that of adult people. Therefore, except in the case of very severe or urgent injury, they should be **ATTENDED TO FIRST**. A young child may die of collapse, caused possibly only by cold or terror, in a comparatively short time.

So see to it that they are put in safe hands, not necessarily those of a First Aid expert, as soon as possible; that they are warmed and comforted and removed from frightening sights and sounds. Impressions of childhood are very

lasting, and everything should be done to avoid a terrifying memory which may have life-long effects.

Quick Reaction

Again, a child has a quick power of recovery and often answers at once to treatment, but care must be taken not to put any strain on them in the early stages of recovery, and to *continue* with all the *precautions* such as rest and warmth (e.g. bed), even when they seem eager to return to normal. There is great danger with children of secondary shock (see page 125), and this may be very dangerous, not only to the body but also to the mind.

Understanding of Small People

A child when ill or frightened will turn to the person she or he knows best. They are not looking for someone who will be efficient in dealing

with their hurt: they are looking for protection and love. Once gain trust, and you will be able to do anything to help. If hurt comes out of the home background, this should be carefully remembered. If it is the lot of the First Aider as a complete stranger to deal with an injured child, start with the understanding of the mental need for comfort, sometimes more important in a little person lying still than in one screaming loudly. Many are frightened into feeling that a screaming child is seriously hurt, when possibly all that is necessary is to switch the focus of attention to someone or something else, and all will be well.

Sudden Illness

Illness with children often seems very sudden. Their temperature rises without warning to what seems an alarming figure. It must be remembered that a child's temperature may be higher without danger than in the case of an adult: 103 to 105 degrees are not unusual in childish illnesses. Their pulse, too, is more rapid, 80 is sometimes normal, and it is often 99. Temperature and pulse are easily affected by excitement and fatigue. Great care must be taken, however, even with such apparently slight causes, for one can never be certain with children, and the progress of an illness may be very rapid indeed. Very often children are too young or too uncertain to complain, or, if delicate, they are often afraid of missing some treat and keep quiet about a sore throat or headache. Do not talk about health to them or ask them a lot of questions, but keep a watchful eye and be *prompt and firm* in your treatment.

The Danger of Spoiling

With the sudden onset of illness a child, perhaps as never before, becomes the centre of the house and of everyone's anxiety, and no-one realizes this more quickly than the small patient. A spoilt child is, indeed, difficult to look after; so, too, is it difficult to nurse a young thing without spoiling it and so making of the future convalescence a nightmare for all concerned, including the victim.

Obedience is as important in illness as in health, otherwise discontent and whining will be the ultimate stage of unhappiness that will follow the convalescence of one who knows that it can get its own way. There is no need for the



48—Pick-a-back (see page 226).

taking of pills and medicine or any treatment to be a struggle, or for convalescence to be a weary business. The youngest of patients takes its cue from the nurse!

Mental Suffering and Fear

With children the mind needs as great care and attention as the body in all cases of accident or sickness.

Fear and alarm are often much greater than physical pain in a child. It is very important, therefore, to comfort and distract them, and, having made them comfortable, to treat the injury as lightly as circumstances allow. Children soon respond, and a cheerful mind is Nature's first step to setting things right in her own marvellous way.

Another source of fear with children is the treatment which their injury or illness may necessitate. It is unknown and therefore alarming, and they may resist. Sometimes it is mere ignorance of what is intended (as, for instance, in the case of being X-rayed), which causes quite unnecessary alarm (not always expressed in words). Here patience, sympathy and understanding are required. A little explanation of what is exactly to happen clears the air and reassures the child, so that he is ready to play his part, and may even be interested in the procedure.

If pain must be suffered, be honest, but ask for courage—a virtue often found in children as in grown-ups. Promise your comforting presence and help, and sometimes the hint of some reward for a brave patient can be a deciding factor.

Then there is the waiting time—so trying to all—when a slight operation has to take place. Here occupation is the greatest help. A story told or read, a puzzle solved, plans made for a day's excursion when all is over, and so on, may pass the time. The amusement must be quiet, but if possible absorbing.

Some children have a natural fear of the dark. It is always wise to cure this as it is such a handicap in life, but during sickness is not the time, as the feeling of helplessness accentuates it, so let the little patient have a small light and the door open. Rest of mind is quite as important as rest of body.

There is still one more point to keep in mind about children and their unspoken fears. They listen eagerly to all you say about them and to them concerning their illness or

injury. Watch your words, warn any visitors. Do not put ideas into the patient's mind. Above all, do not discuss the child's (or anyone else's) illness or symptoms before him or in his hearing (children have sharp ears). You have no idea of what goes on in a child's mind, or what suffering may be caused by a misunderstanding of partially-heard sentences.

Restlessness

Children, on the whole, are restless patients, and they must be watched. It is not fair to trust to their self-control when they are ill. Excitement, so easily aroused, often causes great restlessness, so does pain. If the child's training has inculcated obedience and unselfishness, the nurse's task will be easier, and the patient's life happier.

The patient's clothing should be proof against restlessness at night, and bed-clothes made secure. In the daytime children should not be left alone too long, and never when any process of dressing or treatment is going on. Curiosity and mischief are still factors in the make-up of a child, even when an invalid.

Surroundings

It should never be thought that a child is too young to bother about surroundings. A great deal can be done to help and absorb interest if a little thought is given. A brightly-coloured picture hung where the small patient can lie and watch it (and not always the same picture!) can cheer the dullest of days or rooms! Poster pictures are useful for this purpose. When too seriously ill to take interest in almost anything, a postcard will be clutched for hours on end with just an occasional glance. Cut flowers, especially small gardens, or a bulb to grow will intrigue almost any age of child. A mirror hung at an angle to reflect garden, lane or road is a great joy—so is a daily surprise! This can range from any tiny thing, such as a twig, a flower bud, a fir cone, a coloured toadstool, an oak apple, a queer-shaped or coloured stone, to a caterpillar in a glass jam-jar, or tadpoles or goldfish. Where an appetite wants tempting, a hen's egg in a woven nest with a story attached will sometimes cause a child to say: 'I'd like to eat what Mrs. Hen has sent me.' These are but a few suggestions of the many ways in which help can be given. A live and happy atmo-

sphere maintained in surroundings is necessary to counter the unnatural process of keeping an energetic small creature in bed, and making the patient's environment happier.

Food

Food with children is sometimes a difficulty. It is not possible to give great variety in the food of a child invalid, but it is possible to let its presentation be varied. Eggs and milk can take many forms, and if the tray is differently arranged, often the right atmosphere for pluck, or enjoyment, or obedience is created. The patient must take the necessary nourishment, and it is up to the nurse to find a way to achieve this without friction.

Occupation

When convalescence begins, or when the injury is perhaps only a greenstick fracture, the problem of occupation arises. Here the resourcefulness of the nurse is taxed to the full. Brownie and Guide work have been found most helpful. Old magazines and Christmas cards, bricks for building, beads to thread, plasticine for modelling, puzzles to make, and cut-outs of every type can provide amusement for many hours. When ideas for something new to give a child are running low, remember expensive toys are not necessary; a child will be just as pleased, sometimes more so, with the simplest of toys that can be collected or improvised at no expense, such as curtain rings on a stick, a blank piece of paper and an address stamp or hole puncher, acorns or conkers in a tin, a match box with a surprise inside, brightly-coloured wool and needles to start knitting, some new clothes for a favourite doll or teddy bear—and so on, according to the age and interest of the child. If the patient is old enough to read, this is the greatest help, but reading must be rationed. If the book is very interesting the reader gets too absorbed, and a headache follows and sometimes a rise in temperature. Never leave the book by the bedside—give it out and take it away again.

Monotony is a thing to guard against, and the nurse should understand that a very young child does not usually want to do any one thing for a very long time on end. If something is being a success it is wise to notice the moment when interest is beginning to wane, and attract attention to

something else. Next day there will probably be an eager request for the same thing again, whereas if boredom is once established by overdoing anything the child will not want to try that particular thing again.

In illness, children will, if given a chance, often drop off to sleep for long periods; nothing could be better than this, and quiet care is then needed until the next stage is reached. No attempt should be made to rouse children to play games. This will come as one of the signs of recovery from the patient, and even then periods of play should be interspersed with spells of quiet, as the invalid will rapidly tire. Until completely recovered a child will have little resistance, and energy must be stored. This can only be safeguarded by careful nursing, with a watchful eye on routine.

Routine

Lastly, a very important thing with young patients is this routine. Children, unlike many grown-ups, expect and enjoy a definite programme. Food at regular intervals, rest at regular intervals (one period just before as well as just after meals). Play at regular intervals, treatment at the proper time, washing in definite order, regular use of the lavatory, and so on. They will keep you up to it if you are late with the toys or the meal, and you can have your word about the rest and the medicine.

Children are very easily influenced and very observant. They watch your face, your words, your actions. Be kind, be cheerful, be honest, and your young patients will thrive under your care in many ways.

CHAPTER IV

RESCUE WORK

Introduction to Rescue Work

The Rescuer Badge

A. FIRE

The Fire Brigade Badge
Fire Precautions
Fire Fighting and Rescue
Fire Extinguishers
Use of Stirrup Pump
Chain of Buckets
Thunderstorms
Electrical Breakdown
Electric Shock

B. WATER

The Life-Saver Badge
Ice Accidents
Throwing a Life-line
Life Saving
Methods of Release
Methods of Rescue

C. LAND

How to effect rescue from:
Cliff, Well, Crevasse
In a Fog, In Snow
How to Hold Back a Crowd
How to behave in a Crush, Cinema Fire, Tube
Station, etc.
How to stop a Runaway Horse
Rescue from a Savage Bull
Rescue from a Crashed 'Plane

D. IMMEDIATE AID TREATMENT

Examination of, and Immediate Aid Treatment for,
those Injured in Explosions and Major Accidents.

RESCUE WORK

'Be Prepared' is the motto of the Guides, and training in rescue work is, or should be, a part of the preparation with which each Guide and Ranger equips herself to be of service to others in a tight corner. Rescue work is so closely allied with First Aid that it is difficult to separate the one from the other.

Two attributes are needed when danger is at hand:

COURAGE—Self-control; keeping your head; thinking more of others than yourself; being cheerful, whatever the odds.

KNOWLEDGE—The reward of hard work: it is not enough to *want* to help, you must know *how* to help; all-round training; right application (initiative, common sense).

THE RESCUER BADGE

1. Swim 100 yards and perform three methods of release in the water, two methods of life-saving and artificial respiration. Pages 205, 97.
2. Throw a life-line to reach a person 15 yards away. Page 201.
3. Row a boat alone, and with others, and get into a boat from the water. Know any local dangerous tides and currents.
4. Deal with:
Bleeding. Page 105.
Shock. Page 125.
Snake bites. Page 108.
Dog bites. Page 108.
5. Know how to:
Give the alarm of fire. Page 190.
Call up Police and Fire Brigade. Page 190.
Rescue a person from a room full of smoke, either by dragging or lowering from a window by a rope. Page 230.
Hold back (with others) a crowd and how to behave in a crush (e.g. in a cinema fire or tube station). Page 218.
6. Know the correct way to stop a runaway horse. Page 219.
Know what to do if lost in a fog. Page 216.

The Guide who wears the Rescuer badge should be ready not only to help in an emergency, but to extend her knowledge as suggested in the following sections on rescue work.

A. FIRE

The Fire Brigade Badge
Fire Precautions
Fire Fighting and Rescue Work
Use of Stirrup Pump
Chain of Buckets
Thunderstorms
Electrical Breakdown
Electric Shock
Immediate Aid Treatment

THE FIRE BRIGADE BADGE

1. Demonstrate how to deal with a fire indoors in the initial stage (an overturned oil lamp, clothes on fire, etc.).
2. Know how to beat out a fire in heath, bush or standing corn.
3. Know what to do in case of house on fire (warning inmates, calling N.F.S., Ambulance and Police). Page 190.
4. Use a stirrup pump and chair knot, organise a bucket chain, and demonstrate how to crawl through smoke to drag out an injured person.
5. Demonstrate how to:
 - Deal with shock. Page 124.
 - Deal with burns. Page 110.
 - Deal with scalds. Page 110.
 - Improvise a stretcher. Page 235.
 - Do artificial respiration. Page 97.

Note. This is a Guide badge. The information required for it is to be found in the subsequent notes under 'Fire', except where an indication of a page number shows where to look among the General Information in this book.

FIRE PRECAUTIONS

Sun rays. Bury any glass found lying on heaths and fields or in woods. If fire has begun, beat it out thoroughly with branches.

Christmas decorations. Keep these away from the gas or electric light wires. For a Christmas tree with candles on it have a pail of water handy, and in it a long stick with a

wet pad or sponge on the end to put out candles which burn down or flare.

Curtains on fire. Pull down quickly and roll up to smother the burning part, or throw them out of the window.

Oil lamps. If overturned and oil spilt, do not use water; put on sand or earth, or cover with a heavy rug or carpet. To extinguish lamp, turn down wick and blow sharply across, not down, the chimney.

Cotton wool and celluloid. Keep away from fire and heat. Do not use on Christmas trees with candles.

Flannelette. Do not hang garments of flannelette near a fire or any exposed light to dry. It is a most inflammable material.

Tins of polish should never be left near a range or open fire. They are liable to explode.

Petrol. Petrol and many clothes-cleaning solutions are a great danger if the fumes reach a naked flame. Clothes should be cleaned outside or in a room with no fire. A cigarette or lighted match may cause an explosion.

Paraffin. Beware of putting paraffin on fires. An apparently dead fire will suddenly leap into flame and burn the person who has been rash with paraffin.

Chimney on fire. Warn the owner of the house. The fire should be put out with water or salt.

Children. Small children should never be left alone in a room with a fire unless there is an adequate fireguard around it.

FIRE-FIGHTING AND RESCUE WORK

When Fire Breaks Out

The watchword is prompt action.

Clothes on Fire

A person with clothes on fire should at once be knocked down and rolled in a rug, coat, curtain, table cloth, or anything available. It is important to remember that flames burn upwards, therefore the side which is *not* burning

should be nearest to the ground. Even the smallest flame can leap and spread with amazing rapidity, and the instinct of a person on fire is to rush outside. As the principle is to keep the air away from the fire, a rescuer must act *at once* (tripping them up if necessary). If your own clothes catch fire, put your hand over your mouth and lie down and roll.

House on Fire

1. Alarm the people inside, but if obliged to force an entrance, do as little breaking as possible.
2. Shut all doors and windows to prevent a draught.
3. Make sure all the inhabitants are out of the house. (A search may be necessary, see below.)
4. Warn the fire station.

In a town:

- (a) Run to the nearest alarm, break the glass, pull handle, wait for answer, give a clear address.
- (b) In London dial 999 on the telephone.

In the country:

- (a) Telephone. Call 'Fire', wait, and when fire station answers, give clear address.
- (b) Warn nearest house, on foot or bicycle, asking them to carry on the message.
- (c) Meet the fire brigade and be ready to give all the necessary information.

5. *Note.* It is important, especially in country districts, to know your own district:

- (a) Where the nearest fire alarm is;
- (b) The fire number to call or dial;
- (c) Where the nearest hydrant is;
- (d) Where the best:
 - (i) Water supply;
 - (ii) Stand-pipes;
 - (iii) Brook, stream, etc., can be found.

Method of Entering a Burning Building and Searching for Victims

1. Tie a wet handkerchief over the mouth and nose (to keep out fumes).
2. Open the door carefully (there is sometimes no sign of fire outside, but you must be prepared for blast and smoke).

Have the door in front of you. Close it again slowly behind you.

3. Crawl along the floor. (The fresh air is about six inches from the floor.)

4. Keep to the sides of the room. (If the floor is likely to give way, it is stronger and safer near to the walls.)

5. Look under the beds. People when they are frightened often hide under beds or furniture and may be there overcome by fumes.

6. Drag the person from the room (page 230) and down the stairs (page 232), or if the stairs are gone, to the window and call for help.

7. Be ready to lower if required (page 234).

8. Improvising a rope (page 232), tie round victim and, if need be, lower to ground single-handed (page 233).

9. Know how the last man left can let himself down in complete safety (page 235).

Notes. When practising, a wet cloth or handkerchief should be tied over the mouth and nose, and should be retained during subsequent practising, entrance of the burning building and rescue work. Correct procedure in practice is the best way of forging the all-important links if a real fire emergency should come, and it is unlikely that things left unpractised will be remembered in the stress of that moment.

FIRE-EXTINGUISHERS

For the Ranger Service Star

A Ranger should know how to deal with at least one type of fire-extinguisher so that she may be of use in case of emergency both indoors and outdoors. She should know where different types of fire-extinguishers exist and be able to put them into immediate use. Wherever possible a Ranger should endeavour to see that all fire-extinguishers are kept in first-rate working order, which means that she should see that they are re-filled after use, etc.

Types of Fire-Extinguishers

Apart from stirrup pumps and various kinds of hand and trailer pumps, there are three main types of fire-extinguishers which may be found in private houses, works or blocks of offices, etc. These have a variety of trade names and

directions for use are always painted on the side of the extinguisher.

1. Soda-Acid type

This is the most common, and the Minimax is a well-known example of it. The extinguisher contains acid in a small glass tube which is surrounded by an alkaline solution. A nozzle is fitted at one end. When a fire occurs, take the extinguisher to the spot and strike the knob at the bottom against the floor. This breaks the glass bottle, and the acid mixing with the alkali produces a gas which causes a jet of water, under pressure, to shoot out of the nozzle. Direct this at the seat of the fire. Follow the instructions for refilling after use.

Some extinguishers of this type are turned upside down to mix the acid and alkali, so read the directions carefully.

2. Foam type

This type is found where oil fires are likely, e.g. garages, paint stores, oil-storage depots, etc. A soap-like foam is produced which forms a blanket over the burning oil and smothers the flame. For method of use read the instructions.

3. Gas type

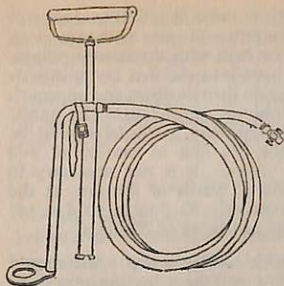
This is the type found on cars. In appearance it looks like a small pump. It contains carbon tetrachloride, and when pumped produces a heavy vapour which blankets the fire, cutting off the oxygen supply. This vapour is poisonous, so the extinguisher should not be used in a confined space such as a garage.

Care

STIRRUP PUMP

1. *Composition.* The stirrup pump consists of (a) foot-piece attached to (b) pump. In action the pump is placed in the bucket and the foot-piece on the ground outside. (c) Length of rubber tubing, (d) nozzle; this has a thumb-piece which can change the size of the flow of water from jet to spray.

2. *Possible defects.* (a) (i) Blocked intake. At the bottom of the pump is a piece of wire gauze to strain dirt. This may become completely choked; or (ii) the small ball which is inside the gauze may become wedged (water can only flow



49—A Stirrup Pump

through the pump when this ball rises to the suction of the upward pull). Both these can often be corrected by prodding a hair pin or piece of stiff wire through the gauze.

(b) Faulty washer. The washer may be found by unscrewing the thumb-screw at the top of the pump, i.e. where the piston enters the casing. The washer can be inspected, and if necessary renewed, or the fault

(water coming through the top of the pump) can be corrected by simply tightening the thumb-screw.

(c) Faulty rubber tubing, i.e. a hole, due generally to stowing it away badly. For temporary repair, tie tightly with anything available, and purchase new tube.

(d) Nozzle. This may become blocked, or the thumb-piece may become stuck. It should always be carefully inspected as the pump is taken out in action.

3. *Where to keep a stirrup pump.* At bottom of top flight of stairs. The tubing neatly coiled and held in place with string round upper end of pump (clove hitch) and round coil (donkey hitch), together with bucket full of water.

Use

The Team. Three people are required.

No. 1. (a) Takes the nozzle into position, (b) directs the flow, (c) gives the commands.

No. 2. (a) Unties coil, gives nozzle to No. 1, (b) pumps, (c) makes up.

No. 3. (a) Carries water, (b) sees that No. 1 is all right, and if necessary carries instructions from her to No. 2, (c) helps to make up.

No. 1 has the most dangerous and difficult task. *Approach to fire.* She should cover mouth and nose with wet cloth (this could with advantage be kept with the stirrup pump), and approach as near as possible to the fire, as quickly as possible, on her feet. She should then lie down and approach as for entering burning buildings (page 230). The nozzle should be held higher than the head. The *jet* should be used and played around the fire first to localize it, and then on to the fire itself. *Note.* It is not necessary to approach nearer than within 15 yards of the fire, as the pump, if worked at approximately 80 double strokes per minute, will throw the jet for a distance of 20 yards.

No. 2 is entirely responsible for the pump. She should watch No. 1 approach the fire, and move her position so as to give her sufficient tubing for her needs; but the tube should be reasonably straight and uncoiled. She should give three or four strokes before the command 'Water on' so as to fill the tube, and after the command 'Water on' keep an even stroke of approximately 80 double strokes (i.e. up and down) per minute.

No. 3 needs two buckets of water. One she places in the position indicated by No. 2; as the water is pumped she replenishes the first bucket with the second. *Note.* It is quicker to dip into a bath or sink of water than to fill from a tap. The tap can be left running so as to ensure a continual supply in the bath or sink. A small piece of wood allowed to float on the top of the bucket to be carried will prevent much slopping over.

The Commands

These are given by No. 1 and, if necessary, carried back to No. 2 by No. 3.

1. *Water on.* This is given when No. 1 is satisfied she is in position.

2. *Water off.* As required.

3. *Make up.* When No. 1 is satisfied that the fire is out, or that the pump is no longer needed. This command is carried out by Nos. 2 and 3.

No. 2 (a) lifts pump out of bucket and pumps through air to exclude all remaining water in tubing, (b) coils tube, starting from pump, and (c) holds coil for No. 3 to tie, and places pump in storage place.

No. 3 (a) straightens and lifts tubing so that water can be pumped out freely, (b) helps to coil, (c) ties coil into position, (d) sees to and puts away buckets.

CHAIN OF BUCKETS

When people are plentiful and fire-fighting apparatus scarce a chain of buckets produces useful results.

1. Obtain as many buckets as possible (one per person being the ideal number).

2. Place the personnel, each with a bucket, at even intervals between the fire and the nearest water supply. No. 1, the person nearest the water, fills the bucket (see notes on filling and carrying buckets, under stirrup pump, page 194) and carries to No. 2, who hands No. 1 her empty bucket and carries the full one to No. 3, who gives her empty bucket to No. 2 and carries the full one to No. 4, and so on, until the person nearest the fire is reached. She throws water on the fire and gives empty bucket to the person who hands her the next full one.

Note. The last person should not be expected to carry bucket more than a few paces before she throws the water on to the fire. It is advisable to have one extra person 'resting'. After every ten or twenty buckets have been filled, she relieves No. 1, and every one moves forward one position, and the actual 'fire-fighter' comes off to rest for a few moments before she starts in again as No. 1.

If the fire is out of doors it may be necessary quickly to deepen or dam a small stream so that time will not be wasted in filling the bucket.

HEATH FIRES, THEIR CAUSE, AND FIRE-FIGHTING

Heath fires, etc., are often caused either by carelessness at a picnic or hike in not putting the fire out properly, or throwing seemingly dead wood with apparently no embers

left to start up again, or by a cigarette end, or people throwing a lighted match away. The fire may be trodden out in the initial stage, but if it has got a hold on heath or bush or standing corn, brooms must be made of branches or sacks tied to sticks, and these must be used with great energy to beat out the fire. It is necessary to be taught how to make one of these brooms and also how to beat, and precautions to take. The person sighting a heath or forest fire should:

1. Notify the nearest dwelling-house at once.
2. Be ready to help in obtaining assistance wherever directed to go. If asked to fire-fight, care must be taken not to be overcome with smoke.

How to make a Fire-Broom

Cut a sapling pole or branch to correspond with a household broomstick, but slightly longer. Bind twigs (for preference birch), about 2-3 feet in length, strongly on to one end, lash and tie off. (See diagram 50.)



50—A Fire Broom

ELECTRIC SHOCK

First Aid in accidents caused by Electricity

First Aid in accidents caused by electricity cannot be efficiently given unless the elements of the working of electricity are understood.

The passage of a current of electricity from one point to another is governed by the voltage between the two points, the current always flowing from a point at high voltage to one at low voltage (just as water will normally run from a high level to a lower one). This voltage is measured in 'volts'.

The current will only flow if a suitable path be provided, i.e. if there is a 'complete circuit' of some conducting material between the two points. The majority of substances will allow the passage of electricity to some extent. Metals are particularly good conductors, and for this

reason metallic wires are used for the supply of electricity. These, however, are not usually left bare, but are surrounded by a material, e.g. rubber, which does not allow current to pass. Such 'insulated' wires may then be handled with safety, and also there is no loss of current by leakage.

The human body is, to some extent, a conductor of electricity. Any wire carrying a current is at a voltage different from that of the earth, so that if a bare wire be touched a current will flow through the body to the earth. If the voltage be high the result may prove fatal. It must be remembered that current may continue to pass through the body, and if the would-be rescuer touches this there is the possibility of another casualty.

Whenever possible the current should be switched off. It is important that Rangers should have an idea of safeguards, both in electrical equipment or in accidents that can occur to those who are or have been in contact with electricity.

They should have an understanding of switches by means of which the current can be switched off, and of fuses which, of their own volition, 'blow off' when the current is too powerful. A Ranger should, in her home or place of employment, ascertain where the switch and fuse-box, etc., are.

If the position of the switch is unknown, then certain precautions must be taken before making an attempt to pull the body clear. Some insulating material must be interposed, e.g. rubber or wood, and this should be dry, otherwise its insulating property is impaired. The rescuer should, if not already wearing rubber-soled shoes, stand on a rubber mat or piece of dry wood, and if possible make use of a hooked walking stick or broom handle (never an umbrella, on account of the metal ribs) to drag the victim clear. If no stick is available, then the hands should be well protected by rubber gloves, mackintosh, thicknesses of dry clothing, or dry newspaper.

Summary of what to do

1. Free the patient from the contact:
 - (a) Switch off the current if possible.
 - (b) Insulate yourself by standing on a non-conductor.

- (c) Protect your hands by means of an insulator.
 - (d) Pull the patient clear with a hooked walking stick or rope.
 - (e) Remember the dangers and guard against them.
2. When clear of contact, start rendering First Aid. In every instance there will be electric shock and probably burns.
- (a) Artificial respiration (page 97) should be started at once and continued until medical help is obtained. In cases of severe shock normal breathing may not return for several hours.
 - (b) Send immediately for a doctor.
 - (c) Cover the burns (page 110).
 - (d) Treat for shock (page 124) and, after the patient has started breathing, massage towards the heart.
 - (e) When the patient comes round, coffee or tea may be given as directed by the doctor. Care should be taken to watch in case of RELAPSE.

THUNDERSTORMS

The habit of sheltering under a tree in a bad storm is so usual that there are numbers of people who either do not know or forget that this is one of the most dangerous places to be in a thunderstorm.

The shock is so great that a person struck by lightning in this way has small hope of recovery, but if they do not happen to have been actually leaning against the tree, the shock may not be a direct one, and though rendered unconscious they may recover with artificial respiration. Self-protection is unnecessary, the current being only transitory. Resuscitation work, therefore, can be started immediately; artificial respiration must begin without delay (page 97).

B. WATER

The Life-Saver Badge
Ice Accidents
Throwing a Life-line
Life-Saving
Methods of Release
Methods of Rescue

LIFE-SAVER BADGE

(Biennial)

The test to be carried out in the following order:

1. Throw a life-line to reach a person 15 yards away.
2. Show Schafer method of resuscitation, and the treatment of the apparently drowned.
3. Perform the land drill for the four methods of rescue and the three methods of release, as set out in the Handbook of the Royal Life-Saving Society. (Complete words of command may be used as for the Intermediate Certificate of the R.L.S.S.)
4. Swim 50 yards in clothes (consisting of the following, worn over a swimming costume: blouse and skirt, or dress; knickers, stockings, rubber shoes. The clothing should be of the normal nature, and be properly fastened). At the end of this swim the candidate may leave the water for the purpose of removing these clothes.
5. Perform in the water, in clothes, any one method of release and rescue (combined), towing the subject 20 yards, as approved by the R.L.S.S.
6. Perform in the water the second and third methods of release and rescue (combined), towing the subject 20 yards.
7. Pick up a brick from the bottom of the bath, at a depth of not less than 5 feet, and carry it to the side, holding it with both hands, and swimming on the back, a distance of not less than 10 yards. The brick to be picked up by means of a proper surface dive, with both hands. Diving off the side of the bath not allowed. Should the candidate fail at the first attempt, she should do it successfully upon the next two attempts.
8. Put on a lifebuoy in the water (an inflated inner tube may be used if a lifebuoy is not available).
9. Swim at least 50 yards in good style by one of the following strokes: (a) breast stroke, (b) side stroke, (c) overarm side stroke, (d) back stroke, using arms and legs, (e) back stroke without use of arms, which should be folded, (f) trudgion, (g) crawl.

In rescue work connected with water it will be quickly realised that those who are prepared to make themselves proficient in braving an element are the ones who can be of the greatest help to those who are in danger of drowning.

For no other reason than this, all who would live up to the motto of the Guides should be prepared to seize every opportunity to learn to swim.

The writer has seen two Guides, after practising YITX land-drill, swim the second time they entered the water.



51—YITX method of Land-drill.

The diagram should be studied, and in practising across a stool or chair the body should form the letters. Position I should be held twice as long as the other positions.

In rescue work from water, however, swimming is by no means all. There is need for proficiency in life-line throwing, artificial respiration, etc., and there are ice accidents, and river, lake and sea, all needing special understanding.

ICE ACCIDENTS

An ice accident is one which rarely happens except in difficult conditions. The intense cold, allied with the difficulty of preventing the victim from sinking and slipping under the ice of the water of lake or pool (if it is any depth), or in the case of a river being swept away by the current, is very great.

Therefore, there is not a moment to be lost in rescue work.

1. Throw to the person who has fallen through the ice something to give him a hold on the ice; i.e. spike, knife, etc. Attach a string in case the first throw does not reach him.

2. If rope is available, make a loop at one end and attach the other to something firm, and throw this to the patient or crawl out with it.

3. If there are others on the ice, make a human chain, lying across the ice holding the ankles of the person in front. First person of the chain should be on the shore or on firm ice. Try and pull the person out, or hold him up until further help arrives.

4. If no ropes and no people, try to push a pole or ladder across the hole to give a hold.

5. Crawl out, spreading your weight, and try to hold him up.

6. After rescue send for the doctor, give artificial respiration if necessary, and treat for shock.

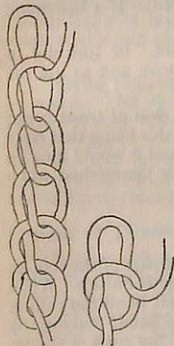
METHOD OF LIFE-LINE THROWING ESPECIALLY SUITABLE FOR ICE ACCIDENTS

This method is especially useful in ice accidents, as the rescuer may have to throw the rope in a recumbent position so that the weight is spread over a larger surface of the ice. A weighted bag, approximately eight ounces, is attached to the line, the rope may be coiled in the left hand or left neatly coiled on the ground in front of the rescuer. The bag is held just above the ground, the rescuer holding the rope at a

height to suit herself. The weight at the end of the line is carefully balanced and swung to and fro so that it moves evenly. No great force is necessary in releasing the line, as the weighted end should carry the rope easily. The weighted end causes the line to pass quickly over the ice. In practice always throw the line to a person, post or given mark, as it is vital to train in accurate direction.

Preparation before Throwing a Life-line

Twelve yards is adequate distance to begin with, but from the beginning of the practice the purpose of throwing a life-line must be kept in mind, accuracy being all-important. Guides should aim at throwing the line between two pegs, over a short stake, or on to a chalked ring on the club-room floor.



52—Crochet Stitch for Storing a Lifeline

It is important to get a good rope for the purpose and to keep it carefully—not coiled, but looped in a crochet stitch (see diagram 52). The best rope is probably unbleached window (sash) cord, as this does not kink like three-ply rope.

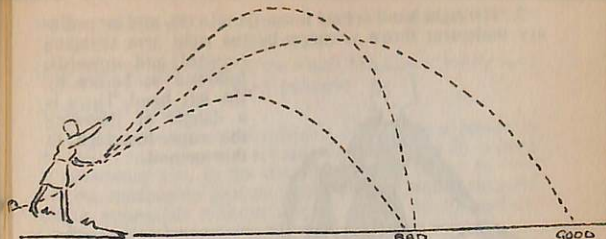
Principals of Throwing

Life-lines can be thrown in several ways, and all Guides and Rangers should experiment to see which way suits them best. There are a few points which should be noted, whatever method is used.

1. It is necessary to attach one end of the life-line to something on the shore so that it is firmly anchored. If there is a convenient tree, post or fence it can be tied to this. It may be necessary to attach it to the thrower. If this is necessary, it is important to be able to get free from the end in case of the rope getting caught or the current proving too strong. One good way is to make a small loop to go over the left hand (have the loop large enough to slip out quickly, but not so large that it comes off by itself).
2. If a forehand method of throwing is used, the left foot is in front (reverse if you are left-handed). If a backhand method is used, the right foot is in front.
3. Freedom of movement is important. Be sure not to get stuck on your feet. Be ready to move and to use the whole of the body as well as the arms.
4. Practice is essential so that a great deal of space is not needed when throwing. The reason for this being that river banks are often surrounded by bushes, and it would then be impossible to use the overarm method or the method when the life-line is swung in circles.

Coiling the Rope

5. Coiling the rope is a very important part of the test, as the success of the throw very much depends on this. When one end of the rope is attached to the left hand the coiling of the rope should take place on to this hand; making the loops fairly large and, when about half the rope is coiled, one finger should go up and the rest of the coiling continued over the others. This will avoid any further fuss in sorting,



53—Practising Throwing a Life-line

for the first part of the coil can be held in the left hand and the other part in the right hand, with one strand of rope only going from one coil to the other. It is important to start coiling from the fixed end, as then any twists or kinks in the rope will be able to unwind themselves.

6. To make any type of throw go as far as possible the rope should leave the right hand at an angle exactly between the vertical and horizontal. The illustration explains the result of this and also of throwing the rope too high or too low.

7. Having practised the throw, the pull-in should also be practised. This should be a steady hand-over-hand pull, letting the rope fall to the ground just beside the feet. Just as in the throw the feet should be apart, with free movement from one foot to the other and in front of the other. It is wise to practise with a weight or person at the end of the rope. Best of all, to practise by pulling someone through the water.

Methods of Throwing

1. Having coiled the rope, hold the right hand slightly below shoulder level and behind the body, standing with the left foot forward (diagram 54). To make the throw, swing the right arm straight through to a forward position where the hand is just above head level. Then let the left hand swing forward from the side with the remainder of the rope and at the same time let the right foot come forward.

2. The right hand is held lower than in (1), and an ordinary underarm throw is made by the right arm swinging forward and upwards, followed as before by the left hand. There is a danger of throwing the rope too high in this method.



54

3. Backhand throws seem to be easier for some people, and are made as follows: Coil the rope as before; stand with right foot forward, left hand by side, right hand slightly forward. With a swing of the right hand, fling the rope, getting the weight on the right foot, and then letting the rope go from the left hand.

If opportunity and environment make it possible to watch a fisherman or a sailor throwing his ropes, it is well worth while; he will probably use one of these three methods, but the skill with which he tackles it would be a considerable help to those learning to throw life-lines.

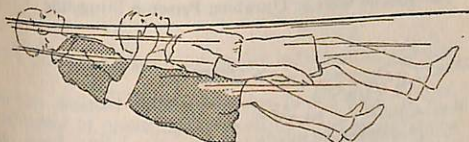
FOUR METHODS OF RESCUE AID, THREE METHODS RELEASE

(Reprinted by permission of the Royal Life-Saving Society from their Handbook)

Methods of Rescue

There are five practical methods of carrying a person in the water; and those who are ignorant of what to do in cases of emergency can, in the course of ten or twelve lessons, become thoroughly proficient and able to render valuable aid in saving life without risk or danger to themselves. General points concerning the methods are as follows:

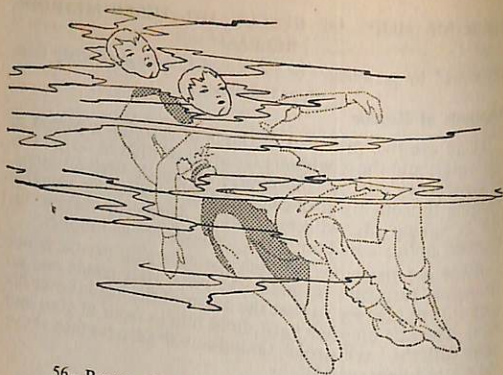
When not struggling. When the drowning person is not struggling turn him on his back, place your hands one on each side of his face so that the palms of the hands cover his ears. Then lie on your back, hold him in front of you, and swim with the back stroke, taking care to keep his face above the water (diagram 55).



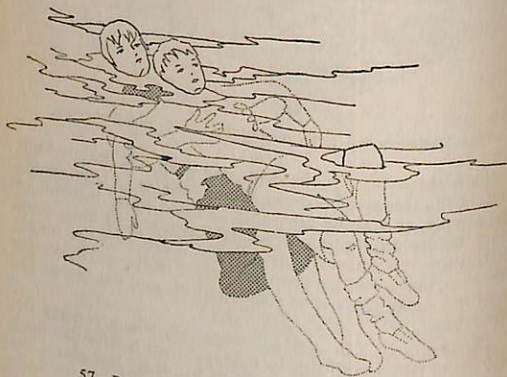
55—Rescue when a Drowning Person is not Struggling

When struggling. If the drowning person is heavily built and, in the frenzy of distress, seems capable of overcoming the rescuer, it may be advisable to tread water just out of reach before attempting to secure a rescue grip until some exhaustion has lessened his energy. Care must be taken, however, that a sudden deep immersion of the one in danger does not make the rescue more difficult and dangerous for the rescuer.

The arm grip. In case of struggling, which renders the drowning person difficult to manage, turn him on his back as before and take a firm hold of his arms just above the elbows. Draw his arms upwards at right-angles to his body and swim with the back stroke. This hold will put the drown-



56—Rescue when a Drowning Person is Struggling

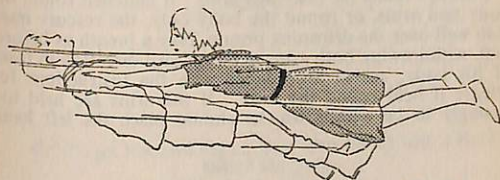


57—Rescue when Arms are Difficult to hold

ing person under control of the rescuer and prevent him from turning round, clutching, or even struggling much (diagram 56).

Arms difficult to hold. If the arms be difficult to grasp, slip your hands under the armpits of the drowning person and place them on his chest and with your arms raise his at right-angles to his body, then lie on your back and swim with the back stroke (diagram 57).

Help when passive. To render assistance to a swimmer attacked by cramp, or exhausted, as well as those in danger of drowning, who may be obedient and remain quiet, the



58—When a Swimmer, though in Difficulties, is Passive

person assisted must place his hands at full stretch on shoulders of rescuer, and lie on his back perfectly still with the head well back. The rescuer being uppermost, and having arms and legs free, swims with the breast stroke. This is by far the easiest method of rescue, and without undue exertion a person can be carried a much longer distance than by any other method (diagram 58).

Methods of Release

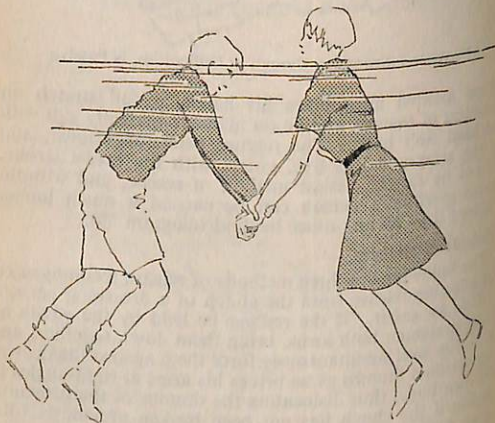
The following are three methods of release recommended for effecting release from the clutch of a drowning person:

Held by wrists. If the rescuer be held by the wrists he must straighten both arms, bring them down together, and at his hip level simultaneously force them against the drowning person's thumbs as he brings his arms at right-angles to his own body, thus dislocating the thumbs of the drowning person if the clutch has not been broken previously (diagram 59).

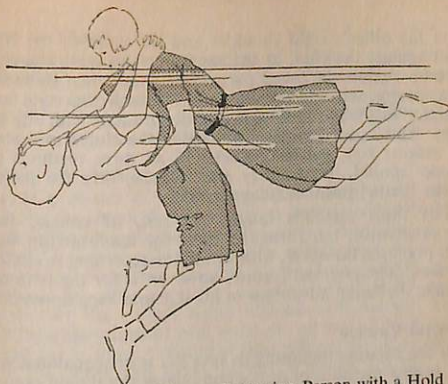
Held by the neck. If clutched round the neck he must take

a deep breath and lean well over the drowning person. At the same time he should place one hand in the small part of his opponent's back, raise the other arm in line with the shoulder and, passing it over the drowning person's arm, pinch the nostrils close with the fingers; then with the palm of this hand on the chin push away downwards with all possible force. The holding of the nose will make the drowning person open his mouth for breathing, but, since he is under water, choking will ensue, his grip will relax, and the rescuer will gain complete control. The other hand should retain its hold during the release (diagram 60).

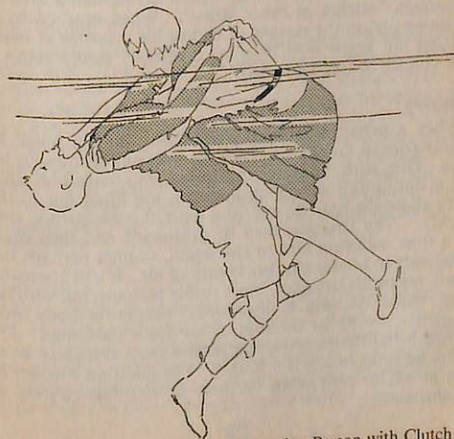
Clutched round the body and arms. If clutched round the body and arms, or round the body only, the rescuer must lean well over the drowning person, take a breath as before, and, withdrawing both arms in an upward direction in front of his body, act in accordance with the instructions for release if held round the neck. If the arms are held too strongly to be withdrawn, he should place the left hand



59—To get Released from Drowning Person with Clutch Round Wrist



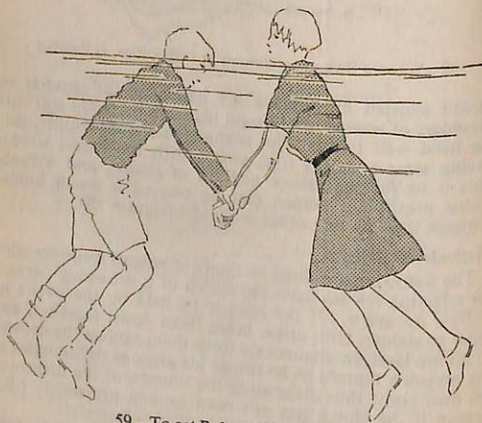
60—To get Released from a Drowning Person with a Hold Round the Neck



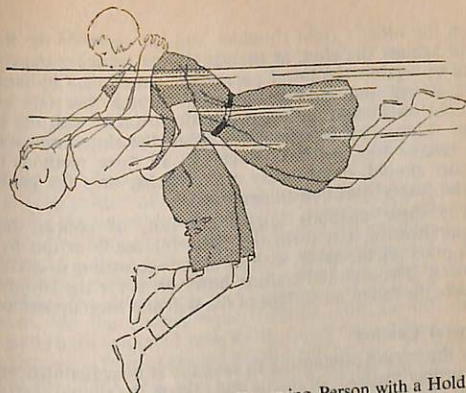
61—To get Released from a Drowning Person with Clutch Round the Body

a deep breath and lean well over the drowning person. At the same time he should place one hand in the small part of his opponent's back, raise the other arm in line with the shoulder and, passing it over the drowning person's arm, pinch the nostrils close with the fingers; then with the palm of this hand on the chin push away downwards with all possible force. The holding of the nose will make the drowning person open his mouth for breathing, but, since he is under water, choking will ensue, his grip will relax, and the rescuer will gain complete control. The other hand should retain its hold during the release (diagram 60).

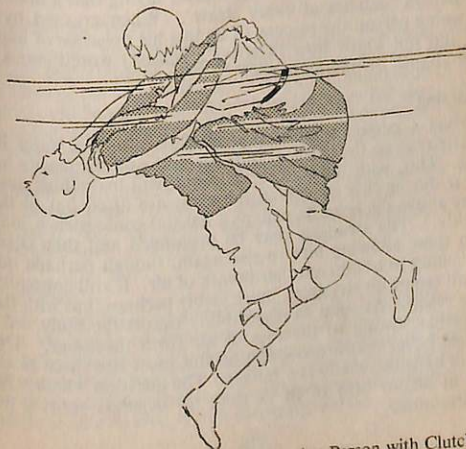
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59—To get Released from Drowning Person with Clutch Round Wrist



60—To get Released from a Drowning Person with a Hold Round the Neck



Person with Clutch

upon the other's right shoulder and the palm of the right hand against the chin, at the same time bringing the right knee up against the lower part of his chest; then by means of a strong and sudden movement stretch the right arm straight out, while pulling firmly downwards with the left arm. This sudden motion will break the clutch and leave the rescuer free, yet in contact. In all three methods the rescuer should, immediately after release, turn the patient to the 'carry' position (diagram 61).

The three methods taught are not, of course, fully comprehensive, but form the basis for ready action by a well-practised life-saver, with variations according to circumstances. The essential feature, however, is for the swimmer to take the fullest advantage of his skill and keep uppermost.

General Caution

If the person attempting to save life is unacquainted with the proper methods of rescue and release she should exercise great caution, because, through ignorance, two lives may be placed in jeopardy. It is a well-known saying that a drowning person 'catches at every straw'. When grasped by a drowning person the rescuer (if he lost his presence of mind and did not know how to effect a release) would stand a poor chance of freeing himself.

Drowning

When a person unable to swim falls into the water he usually rises to the surface, calls for help and throws up his arms. This, with the water swallowed, will make him sink; and if during this struggling the arms are lifted out of the water above the head he will, as a natural consequence, sink quickly. The struggles may be prolonged and then cease for a time, allowing him to rise again, though perhaps not sufficiently to obtain another breath of air. If still conscious he will renew his struggles, more feebly perhaps, but with the same result. As soon as insensibility occurs the body sinks altogether, owing to the loss of air from the lungs. The general belief that a drowning person must rise three times before he sinks finally is a fallacy. The question whether he rises at all, or how often he does so, depends entirely on the circumstances.

Lose no Time

On seeing a person struggling in the water in danger of drowning, the first thing to be remembered is to lose no time. As already stated, the drowning person may sink and not rise again; and in that case it may be very difficult for the rescuer to find the object of his search.

Taking off Clothing

It is a matter of judgment whether the rescuer, before entering the water, should remove a portion of his clothing. If the drowning person is on the surface and close to the shore the rescuer will probably be in the water for a very short time; therefore there is no need to remove much clothing, for although it may somewhat impede his movements, yet the clothes being inflated with air will assist floating until saturated with water. In all cases it is advisable to remove as much clothing as time will permit. Commence with the boots and heavy garments, which are the chief hindrance to swimming, but use judgment, as a moment's delay may mean the loss of human life.

Entering the Water

A rescuer who wishes to be thoroughly proficient should know something of floating and diving, especially from the surface of the water. Before diving a full inhalation of fresh air should be taken, and staying under water for long periods avoided, as it exhausts the powers for fresh effort. Where weeds abound, and there is danger of entanglement, progress should be made by gentle motions in the direction of the stream. If the rescuer is unaware of the depth of the water, or has to enter it from a great height, as from a bridge, vessel or pier, and is not used to diving and plunging, it is best to drop in feet first.

Approach

The next thing to consider is how best to approach anyone in danger of drowning. There is great risk from the clutch of a drowning person unless the rescuer has been properly instructed how to effect a release. It is inadvisable to approach from the front, but it is necessary to know what to do if face to face with a drowning person.

Drowning Clutch

If this state of things be unavoidable the person in distress should be grasped firmly and turned on his back, when he will probably give up his struggles and submit quietly as soon as he finds himself supported and able to breathe freely. The rescuer may, however, find himself seized by the drowning person, who will probably not let go until forced to do so. If this should happen, there must be no hesitation or scruple to use any means necessary to obtain release. It is absolutely necessary that the rescuer should take full advantage of his knowledge of the water and keep uppermost. This will be of material service, as it will weaken the drowning person and make the difficult task of getting away much easier.

How to Carry a Person

In carrying a person through the water it will be advantageous to keep the legs well up to the surface, and the whole body as horizontal as possible, thus avoiding the drag which will naturally result from a perpendicular position. The legs may be kept from sinking by the rescuer occasionally putting them up with his own feet.

Important Points to Remember

Rescuers must always remember that it is most important to keep the face of the drowning person above the water, even if their own should at times become immersed. They should avoid all jerking, struggling or tugging, and swim with a regular, well-timed stroke of the legs, husbanding their strength for continued effort. If this is properly done much confidence is imparted, as the drowning person is able to breathe with freedom and may cease struggling, feeling that he is in safe hands.

Recovering from the Bottom

In some cases it may be that the drowning person has sunk to the bottom and does not rise again. Bubbles may rise to the surface giving some indication of the position of the body. In still water the bubbles rise perpendicularly; in running water they rise obliquely, so that the rescuer must look for his object higher up the stream than where the bubbles appear. It should be remembered also that in running water a body will be carried along, and must be

looked for in a straight line in the direction in which the current is running. But the rescuer should waste no time before attempting to find the body. On reaching the drowning person who has sunk to the bottom he should be seized by the head or shoulders, the left foot placed on the ground and the right knee in the small of his back, then with a vigorous push off from the bottom swim to the surface by the back stroke.

Recovering from a Muddy Bottom

If the body is on a muddy bottom the rescuer should take care not to touch the bottom when endeavouring to rise, but should grasp the subject by the head, as in the first method of rescue, or by the arms, as in the second method, then with a vigorous leg kick swim to the surface.

Waste of Strength

Rescuers must at all times be governed by circumstances, using their judgment as to which method they will adopt in conveying the drowning person to shore, always taking care to avoid wasting their strength hopelessly against an adverse tide or stream—rather float with it, gradually making for shore, somewhat across the direction of the current until a boat or other aid may arrive.

Lifting the Subject from the Water

Having rescued a drowning person it is necessary to know how to lift him out of the water and to carry him to a suitable place to promote resuscitation.

When the bank is steep the first precaution is to ensure that the subject will not slip back. Do this by placing his hand on the side of the bank or rail of the dock, clamping your own hand on top of his to prevent him slipping back whilst you climb out. Now cross your arms and grip his right wrist with your right hand and his left wrist with your left hand. Stand with your feet well apart and correct your balance, lift and lower him several times, then smartly raise the patient by the arms. This movement will turn him so that his back is towards the bank, and the upward lift will bring him to a sitting position on the side. As soon as he has attained this position, pull him a few feet so as to be clear of the edge. He may now be turned over in the prescribed way and resuscitation, if necessary, proceeded with (page 97).

C. LAND

How to Effect Rescue from:

Cliff
Well
Crevasse
In a Fog
In the Snow

How to Hold Back a Crowd

How to Behave in a Crush, Cinema Fire, Tube Station, etc.

How to Stop a Runaway Horse

Rescue from a Crashed Plane

Rescue from a Savage Bull

Common sense is the attribute needed, perhaps, more than any other in dealing with the rescue work in this section. The individual circumstances will vary so much that it is difficult to give more than a few general suggestions.

Cliff

When someone has fallen over a cliff:

1. Ascertain what has happened. Lie down (wriggle to edge of cliff, look over. Never stand, the cliff may be overhanging. If a second person, get him to lie also, and hold your ankles or lie across your feet).

2. Reassure the person who has fallen if they are within earshot and conscious.

3. Get help, either by climbing down the cliff yourself if it is possible, or running for assistance and ropes.

4. Be able to direct rescue party:

- (a) How to test the strength of a rope, page 234.
- (b) How to guard against it fraying, page 235.
- (c) What knots are safe in rescue work, page 242.
- (d) How to take the strain on a rope, page 234.
- (e) How to lower a stretcher if necessary, page 241.
- (f) The treatment for shock, page 124.

(g) Immediate aid for:

Bleeding, page 103.

Fractures, page 118.

Artificial respiration, page 97.

Well

To fall down a well is a very dangerous thing, because although the water in it will break the shock of the fall and probably avert broken limbs, there is immediate danger of drowning, with the probability of smooth stones and nothing at the side of the well to grip.

1. If available, throw a ladder, stake or plank across the well (be sure it is not rotten or it will be an added danger).

2. Pull off your coat, lie down immediately, lowering it for person to grip hold of it.

3. Brace yourself by the ladder with one hand and hooking your feet if possible under any support as you lie (such as a tree root), prepare to take a strong hold.

4. Shout for help, alternating this with reassurances to victim and encouragement to hold on till help comes.

5. If a second person is available, send them for further assistance and a rope.

If the well is no great depth, lower a ladder if one is available.

When rescued, immediate treatment for shock (page 124) should be resorted to.

Crevasse

See Cliff.

Know the mountaineer's hold for a rope (page 233). When the injured person is reached, at once treat for shock. Reassure if conscious.

To secure a person to a stretcher for transport, lowering up or down mountains or cliffs, see page 240.

Fog

To get lost in a fog may be very dangerous. It is a fact that a thick fog quickly causes one to lose one's sense of direction and fills one with a cold, damp fear which tends to paralyze the brain. This must be stoutly resisted. In a town, though one may not know exactly where one is, one cannot be really lost, but in the country this is far from the case.

If lost in a fog on a mountain, stand still; it is too dangerous to attempt searching for the way, as it is so easy to have a bad fall. Shout at intervals and wait for the fog to lift. Then proceed as suggested under 'Lost on Moors'. On a smaller hill where there are no steep drops, to follow a stream downhill will eventually lead to the valley and probably houses.

If fog-bound on moors, the chief danger is a bog. Never keep on if ground becomes very spongy; a detour will be necessary. Make tracking signs. With a compass it is possible to keep going in the right direction, but even so it is very difficult to walk without making leeway. If there are two or three in the party, there is a fairly accurate way of walking straight on a compass bearing. Thus: A stands and holds the compass, B and C then walk on ahead in single file on the decided bearing. C goes as far as she can before losing sight of A. B stops half-way between A and C. A, B and C can thus mark out a straight line on the desired compass bearing. A then walks up the line to B, gives her the compass and passes on up the line, past C, to take up another position on the line directed by B, who now has the compass at A 2. B then follows in the same manner to B 2. This manoeuvre is continued as long as necessary. A — B — C — A 2 — B 2 — C 2 — A 3—, and so on.

Points to look out for:

- (a) It is important to keep calm and not give way to fear.
- (b) It is important never to hurry; to be observant; notice any objects or landmarks to be seen, and other phenomena such as wind, sound, and so on, and consider them intelligently.
- (c) One should not make the mistake (not unheard of) of suddenly and unreasonably suspecting that one's compass has gone wrong.

(d) Remembering to make tracking signs is important from the moment of being uncertain of the way. These would help (i) a search party, or (ii) for the retracing of the way to the point where it was lost.

(e) To maintain confidence in oneself and one's party is most necessary.

A person who keeps her head screwed on the right way round and does not lose her nerve is of more use in getting out of a tight corner than almost anything else.

Snowstorm

To be lost in the snow occurs again mainly on moors and mountains, after or during a heavy fall of snow, when the track becomes obliterated. If a landmark can be seen this should be followed; where there is none, use a compass as suggested above. Without landmark or compass it is far wiser to remain on or near a recognised route than to wander off where a search party will not be so likely to go. Get what shelter possible from rock or trees, or build the snow up to give protection from the wind.

KEEP AWAKE. A good dodge is to walk up and down, having put something in the way that it is necessary to step over. A fall will bring its own reward, the realization that sleep was getting the upper hand.

If the depth of snow makes moving impossible, sing every camp-fire song and hymn you know and hit yourself all over between each one. If several are stranded together, competitions can be invented—keep going and cheerful; with every half-hour that passes a rescue party will be coming nearer, and those who keep themselves and their companions going in a crisis are worth knowing.

HOLDING BACK A CROWD

Extract from *Scouting for Boys*

"There is a useful kind of drill called 'Scrum' for keeping back the crowd. The Scouts form a line or double line, and pass their arms round each other's waists, and shove, head down, into the crowd, and so drive it back."

Another Method, using Staves

Hold the staves horizontally in front of a line of Guides or Rangers, with the ends of the staves overlapping in front of each girl, and held firmly in her two hands. This makes a kind of fence. ALWAYS FACE THE CROWD, AND BE ABSOLUTELY DETERMINED. If they see you waver you are lost!

If Caught in a Crush

Mass panic is a most contagious thing. When caught in a crush every Guide or Ranger will know that she must behave calmly and courteously, and yet have the sense to see that neither she nor her immediate neighbours trip or slip or are pushed off the platform. To keep your head and wits in all circumstances is vital, and to train yourself to think clearly, even when frightened, may save others as well as yourself.

Train Accidents

1. Put your foot across the carriage if a child is playing near the door—if the door should swing open, grab its coat and hold on till others pull it back.

2. If a passenger falls out of a train immediately pull the alarm chain running along top of carriage over window.

3. If a person is jostled by a crowd on to the line in the path of an oncoming train, either (a) shout to him to lie down, or (b) jump down after him and hold him in the tracks, avoiding the rails (the train will then pass over you without injury, as there is sufficient clearance).

4. A bridge gone or damage to track. Run up the line, warn signals-box, or wave garment, red if possible, to attract engine-driver, and so signal train to stop.

Cinema Accidents

Most frequently caused by fire and subsequent panic. A Guide once stopped a stampede by climbing over the seats to the organ and playing 'God Save the King' (the only tune she knew). Shout loudly: 'It's quite all right. . . . Fire is under control'. Hold on to waist of person in front of you; do not rush. Keep away, and keep others away, from crush near exit doors. There is less danger in the burning building than in a crowd of frightened people. For rescue work see page 230.

A Crashed Aeroplane

Run. Any life left in the crew of the plane may depend on your speed. Release belt and drag them clear, and to a safe distance (fire may at any moment break out). Treat for shock. If fire has already started, cover your mouth and nose with your handkerchief or a scarf tied behind your head. Go forward and do your best. It may be only a few moments before the flames make rescue work impossible.

Immediate aid treatment of burns, page 110.

Shock, page 124.

TO STOP A RUNAWAY HORSE

(Extract from *Scouting for Boys*)

'The way to stop a runaway horse is not to run out in front of it and wave your arms, as so many people do, but to try and race alongside it, catch hold of the shaft to keep yourself from falling, and seize the reins with the other hand and drag the horse's head round towards you, and so turn or him until you can bring him up against a wall or house, or otherwise compel him to stop. But, of course, for a boy with his light weight, this is a very difficult thing to do. The share he would have in such an accident would probably be to look after the people injured by the runaway horse.'

TO HELP OTHERS TO ESCAPE FROM A BULL

If you see a person running with a bull in pursuit, shout loudly from wherever you are, so that the bull will turn to see where the noise comes from and his victim may escape. Then dodge quickly, hide behind a fence or trees and so avoid him.

If a bull attacks you, do not run straight, but when he charges jump aside. A bull will lower his head and charge blind. A coat thrown over his horns will put him out of action long enough for anyone to escape, but this is a feat which is easier talked of than done. Better trust to your legs to remove you as quickly as possible behind the nearest fence.

D. IMMEDIATE AID TREATMENT

Examination of and Immediate Aid Treatment for those Injured in Explosions and Major Accidents

It is impossible under some conditions to give a complete examination. It is easy to notice injuries which are likely to be made worse by transport, e.g. severe bleeding, crushed or torn-off limbs, bad fractures, or crushing injuries to the chest, etc.

The First Aider may miss some injuries in a hurry, but, if casualties are carefully moved, less harm will come to them than by exposing them to the further injury of collapsing walls, etc.

Always look for signs of bleeding and shock and deal with the obvious injuries, using the body as a splint. Restore breathing if necessary, see page 97.

In this way treat only the more seriously injured, and the minor ones as time allows, always determining first whether it is more urgent to move the patient to safety.

Remember

1. Improvise bandages from strips of cloth, splints from anything handy, not forgetting that the result of this bandaging is what matters, not its attractive appearance.
2. That the prevention and treatment of shock is of as vital importance as the injury itself.
3. That patients must be handled gently, pain eased, and anxiety allayed.

Bleeding

1. No matter what other injuries there may be, stop the bleeding first.
2. Apply digital pressure on the spot.
3. If bleeding from a limb, raise the limb.
4. Pressure at main pressure point above injury if arterial bleeding (bright red blood spurting out). It is unwise for tourniquets to be used except by the professional expert; the First Aider is likely to do more harm than good.

If direct pressure fails to control the bleeding the safest method is achieved by graduated compression, which is the

only form of tourniquet which the Civil Defence advised for their workers after experience of the damage done with tourniquets after blitz conditions (see page 105).

Internal bleeding. Do not give anything to drink. Keep flat and still on back. Where there is vomiting, lay face downwards with supports to hold head out beyond stretcher. If unconscious, turn head to side to prevent tongue falling back.

For chart of arteries, giving pressure points, see inside front cover.

Shock

Many deaths have occurred which could have been saved if treatment for shock had been given in the early stages. This is an important thing to remember. It is not difficult and is a valuable contribution that anyone can give after an accident, however scanty the knowledge of more advanced First Aid may be. Shock occurs with almost every accident or injury, and when a person has been seriously hurt their vitality is lowered and circulation fails.

Shock is especially severe after burns, crushed limbs, extensive fractures, head injuries, internal wounds or injuries.

The condition is increased by bleeding, pain, cold, worry and rough handling.

Signs. Pallor of the face, coldness, shivering, faintness, lassitude, restlessness, shallow breathing, vomiting, rapid yet feeble pulse, often cold and clammy skin.

Treatment. If signs of shock are already present it is urgent that relief should be given at once. If they are not yet present, measures must be taken as quickly as possible to prevent it from developing. It must not be expected that all the above signs will be present in every case, sometimes only one or two may be noticed.

What to do:

1. Stop any bleeding.
2. Keep the injured person lying flat, in as comfortable a position as possible.
3. Keep WARM—blankets under as well as over, rugs, hot-water bottles (covered); tuck all limbs well up, leaving nothing but face exposed.

4. Hot drinks, only if conscious and no internal injuries.
5. Don't fuss, keep patient quiet and reassure.
6. Send to hospital if badly hurt or shocked as soon as possible.
7. Never give brandy, whisky or other alcohol.

Burns

These are frequently met with in cases of persons trapped in burning houses. The severity of a burn depends more on its extent than its depth. Shock always accompanies a burn, and in the case of a child, unless shock is immediately treated, death may quickly follow, not from the burn itself but from shock.

Treatment of burns.

1. Cover the burn, excluding air.
2. Relieve pain.
3. Treat for shock.

Fractures

Where skilled help is unobtainable for some time it is sometimes necessary for the First Aider to do more than otherwise she would attempt.

Notes

Use the body as a splint.

Broken hip bones. Tear up strips of strong material, or if possible find a roller towel or table cloth; pin or secure round hips and thighs.

Broken lower arm. Sling.

Broken upper arm (above elbow). Bandage the arm, using broad fold bandage, above the elbow to the chest and put the lower arm in a sling.

Broken thigh. Tie the legs and feet.

Broken shin. Tie legs together and feet together—do not remove boots.

Injuries to spine. Most vital to keep flat and immobile. As little movement as possible. Roll rugs under before raising. Lie absolutely flat.

Injuries to ribs. Incline to injured side in order to leave the lung on the uninjured side free to work, and roll support down back so that weight in transit will be off the fractured ends of bone.

If the fractures are open, stop the bleeding. Cover the wound with clean dressings. Remember that any padding (garments or strips of bedding) will help to steady the limb and ease the pain.

Wounds

These can be very varied, ranging from flying glass splinters to shrapnel or machine-gun bullets, etc.

The chief dangers are bleeding, infection (sepsis), serious internal injury and shock.

Treatment. Expose wound, cutting away clothing if necessary. Stop the bleeding. Remove fragments of metal or glass sticking out of the wound *only* if they come away easily. Do *not* pull anything that sticks. Do not probe in wound. Put on field dressing, keeping as clean as possible. Bandage dressing in place. Treat for shock.

Reference Notes

Lifts and carrying of the injured, page 224.

How to fold blankets on stretchers, and blanketing for shock, page 240.

Treatment of asphyxia and how to do artificial respiration, page 96.

The treatment of burns, page 110.

The treatment of accidents caused by electricity, page 197.

The treatment of shock, page 124.

Pressure-point chart, for stopping of bleeding, inside front cover.

How to lower persons from windows, page 232.

The carrying and delivering of messages, page 244.